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THE OÖLOGIST,

FOR THE

STUDENT OF BIRDS,

THEIR NESTS AND EGGS.

VOLUME XIII.

ALBION, N. Y.:

FRANK H. LATTIN, PUBLISHER,

1896.

A. M. EDDY,
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1896.

INDEX TO VOL. XIII.

Albinism in Birds.....	4	Guillemot, Black.....	10
Assinibola, Great Northern Shrike Nesting in.....	39	Gull, American Herring.....	10
Assinibola, My 1895 Outing in.....	19		
Birds, Albinism in.....	4	Hawk, American Rough-leg.....	21
Birds of Gage Co., Neb., Notes on Some.....	15	Hawk, Ferruginous Rough-leg.....	20
Birds of Tonawanda Swamp, Two Inter- esting.....	29, 50	Hawk Flights noticed at Lake Forest, Ill.....	36
Bird Skins, A Few Don'ts for Amateurs in Making.....	27	Hawk, Red-tailed.....	23
Birds, The Study of.....	28	Heron, Great Blue.....	29, 53
Bittern, The American.....	50	Hummingbirds.....	45
Bond which Unites us, The.....	8		
Bufflehead.....	19	Jay, The Blue.....	26
Canvas-back.....	20		
Caracara, Audubon's.....	21	Kingfisher, Nesting of the Belted.....	37
Chickadee, The.....	25	Kinglet, The Golden-crowned.....	26
Chickadee, Hudsonian.....	13, 26	Kite, Swallow-tailed.....	43
Choir, The Feathered.....	52		
Climbing and Collecting.....	30	Lark Bunting, The.....	15
Collecting in Penobscot Bay, My '95.....	9	Lark, The Prairie-Horned.....	15
Cormorant, Double-crested.....	13		
Creeper, The Brown.....	26	Mallard.....	20
Crossbill, The American.....	26	Meadowlark, Western.....	19
Crow, The American.....	26	Merganser, Red-breasted.....	10
		McClair, Wm.....	6
District of Columbia, Notes from.....	16	Michigan Ornithological Club.....	7, 28
Dove, Mourning.....	14	Museum, Peabody.....	14
		My First Take of '96.....	27
Eagle, Bald.....	13, 43	Nesting Sites, Peculiar.....	40
Eggs, A Few Odd.....	39	Nests, The Finding of Owls.....	17
Eggs of Belted Piping Plover.....	40	Northwestern Ornithological Association.....	8
Eider, American.....	10, 11	Notes, A Handful of Winter.....	25
		Notes on Some Birds of Gage Co., Neb.....	15
Flicker The.....	15, 19	Notes, The Taking of.....	41
Frigate Bird.....	41	Nuthatch, The Red-bellied.....	25
Gems, Feathered.....	45	Observation, Minor.....	16
Goldfinch, The American.....	26	Oological Crookedness.....	48
Goose, Canada.....	43	Ornithologist, Winter Work for the.....	1
Grackle, The Bronzed.....	32	Ornithological Association, Northwestern.....	8
Greene, Monmouth H.....	8	Ornithological Club, Michigan.....	7, 28
Grosbeak, The Pine.....	26	Outing in Assinibola, My 1895.....	19
Grouse, The Ruffed.....	26	Owl, Barred.....	17
		Owl, Screech.....	17
		Owl, The Burrowing.....	15
		Owl, The Great Horned.....	17, 27, 40
		Owl, The Long-eared.....	17, 20
		Owls' Nests, The Finding of.....	17

Pelican, Brown.....	44
Penobscot Bay, My '95 Collecting in.....	9
Petrel, Leache's.....	12
Pigeon, Passenger.....	43
Plover, Eggs of Belted Piping.....	4
Prize Contest (Aug.-Sept. '95).....	8
Rail, Yellow.....	21
Raven, Northern.....	13
Redpoll, The.....	25
Sandpiper, Solitary.....	40
Shrike, Great Northern.....	20, 23, 29
Shrike, The White-rumped.....	26
Snow Bunting, The.....	25
Sparrow, Clay-colored.....	50 52
Sparrow, The Tree.....	26
Species. The Passing of.....	42
Story of a Find, The.....	34
Swallow, White-bellied.....	19
Swift, Chimney.....	40
Terns, Common.....	9,
Tonawanda Swamp, Two Interesting	
Birds of.....	29, 00
Trinidad, From.....	44
Verrill, Albert H.....	14
Vulture, Black.....	44
Wells, Charles W.....	8
Winter Notes, A Handful of.....	25
Winter Work for the Ornithologist.....	1
Woodpecker, The Downy.....	26
Wren, Bewicks.....	35
Yellow Hammer.....	19



THE OÖLOGIST.

Monthly.

VOL. XIII. NO. 1.

ALBION, N. Y., JANUARY, 1896.

WHOLE No. 123

Wants, Exchanges, and For Sales.

Brief special announcements. "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

"DEALERS" can use these columns at *Regular Advertising rates, only*.

Strictly first-class specimens will be accepted in payment at one-half list rates.

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

WANTED—Davie's Taxidermy, latest edition. Will exchange books or sets with data, or will pay cash if cheap and in good condition. A. W. PLUMB, Flint, Mich.

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WANTED.—A pair of climbers, strapped preferred. Will give good exchange or cash. HERVEY L. SMITH, Smith's Ferry, Mass.

WANTED.—Books on Zoology or Chemistry, or good microscope. Can offer sets and skins and part of Maynard's Birds of North America. Send list of books. FRED MC ALLISTER, Davison, Mich.

WANTED.—Good 32 cal. revolver, also violin and harp. Will exchange for same, first-class eggs, sets or singles. DANA C. GILLET, Barre Center, N. Y.

NOTICE.—A. 1. skin of Willow Ptarmigan, pure white phase, just skinned and in fine shape for mounting, \$1.35 *prepaid*. Address, ERNEST H. SHORT, Albion, N. Y.

EXCHANGE.—California birds eggs, sets or singles for United States and foreign stamps. All letters answered. J. W. RIFE, 1010 So. Olive St., Los Angeles, Calif.

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HILLARD CYCLOMETER, 30 in., good as new. Will exchange for first-class sets or best offer. R. E. PIKE, Box 32, Livermore, Me.

ERRATA.—In my ad. in last issue prices on birds eggs were per set and not per egg. Skin of Am. Dipper or Water Ouzel should be 50c. instead of \$1.00. E. H. SHORT, Albion, N. Y.

WANTED.—First-class sets with data of 49, 51, 54, 56, 58, 125, 126, 184, 186, 194, 197, 202, 203, 325, 326, 335, 336, 339, 347, 364 and 378. I will pay cash for the above. Write stating price and number in set. ROBERT A. TOMLINSON, Alden, Ia.

HAVE 4 Vols. Good News to exchange for eggs in sets. Send list. FRED BLACK, 904 Osborn St., Kalamazoo, Mich.

PAIR of Thoroughbred \$10 Blower Pigeons for sale, or exchange for eggs or small camera. A No. 1. goods sent, same expected. GEO. COLE, Joy Road & 12th St., Detroit, Mich.

WANTED.—Nests of A O. U. 431, 443, 447, 462, 464, 466a, 510, 519, 529a, 542a, 552a, 560a, 581c, 588a, 591b, 596, 597, 599, 601, 622b, 710, 713, 721a, 758 and others. I offer other nests, correctly named, Coleoptera, shells, reptiles, batrachians, skulls, Indian pottery, foreign stamps, stamp papers, tin tags, fresh skins of Snowflake and Lapland Longspur, skates, climbers, etc. Any of above also given for fine sets eggs, skins or old U. S. stamps. Enclose stamp for reply. W. E. SNYDER, Beaver Dam, Wis.

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TO EXCHANGE.—Desirable bird skins for same and sets. Many common ones wanted, eastern species especially. Fine skins only exchanged. Also want large calibre Winchester, 45-90 preferred for cash or exchange. All answered. CHAS. D. KAEDING, Box 20, Drytown, Amador Co., Calif.

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- Davie's "Methods in the Art of Taxidermy," \$6.00, regular price \$10.00.

Some of these have names in front but are otherwise exactly as good as new. Will be sent *prepaid* at any time during Feb., 1896.

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THE OÖLOGIST.

VOL. XIII. NO. 1.

ALBION, N. Y., JANUARY, 1896.

WHOLE No. 123.

Winter Work For the Ornithologist.

The ornithologist who aspires to be more than a mere collector knows that his work does not stop with the close of the collecting season. Every occupation has two aspects or sides, and in the studies of the ornithologist there is a pleasant side and there is also a time when there is more or less apparent drudgery connected with the work. The summer collecting is the enjoyable side of the naturalist's vacation, and there are few of us who need to be spurred toward the woods and fields. The real enjoyment of a day afield or afloat is in itself the best reward for the exertions made and the hardships frequently encountered, and the communion with the forms of nature which most strongly appeal to our desires is an incentive which we are unable to resist. There is a more laborious part of the work of the ornithologist, however, which we are inclined to neglect, and yet it is the part which is helpful to the world and to those of our fellow-collectors in different regions of the country. Hence I feel impelled to remind my friends of the OÖLOGIST that the winter work of the ornithologist is no less important to his advancement in the noble science he has espoused, and far more valuable to his co-workers and to the cause of ornithology, than the more pleasurable work of the real collecting time.

The supreme aim of the student of nature, in any department of her manifold aspects, should be the accumulation of knowledge for the enlightenment of others. The science of ornithology has made rapid strides in the past few years, solely because the best

observers were willing to contribute their observations to the growing stock of knowledge. He who builds up a collection of eggs or skins with no desire to contribute the facts acquired to his fellow-collectors, but at the close of the season locks his cabinet and shuts his treasures from the light, and allows his notes to lie unheeded where none will be the wiser for his season's work, is no better than the miser whose character is regarded as despicable. I feel that if all the collectors of this country were actuated by the motives of the true naturalist, the mails would be burdened with manuscripts addressed to the OÖLOGIST and other journals published in the interests of birds and beasts, and the facts so important to the advancement of this science would soon be brought to light.

The chief part of the work of the ornithologist in the long evenings of winter should be the careful study of the specimens taken in the proper season. There are frequently days in the collecting season when we are scarcely able to prepare the numbers of specimens we have taken, and many desirable additions are made to our collections when we have no time to study them whatever. After we have tramped all day along streams and through swamps, or have clambered up many trees, often with exertions bordering on exhaustion, and have prepared the results of the day's efforts by working well into the night, we have little time to give close scrutiny to the treasures we have obtained to our great satisfaction. Then many of us feel that the records of oölogy are complete enough, and that there are others who are more fitted for that part of the work, so we pay little atten-

tion to the examination of our specimens except to admire them in a rather indefinite way and when we need information about them we seek the pages of Davie, Cones, Ridgway and other leaders of ornithology. Well as the field has been worked, however, there yet remains enough to be learned about birds and their eggs to startle the novice, and even experts will have to admit that the end is not yet. In all the descriptions I have read of the eggs of the King Rail and of the Florida Gallinule I have been unable to distinguish one from the other simply from the descriptions, though the difference is apparent enough to be carefully expressed. And so the eggs of many other species lack close discrimination in description, and hence the winter work of the ornithologist might be profitably spent in careful study of the specimens lying so snugly on their downy beds in the dark recesses of our cabinets.

The re-writing of the data gathered in our note-books is an important means of advancing our own knowledge and preserving it in more intelligible form. Frequently in our hurry to dispose of the fruits of our day's exertions in the field we are prone to make hasty notes and to abbreviate them in such a manner that they would be unintelligible to another and often difficult of translation by ourselves after they have "got cold." In the winter when time hangs heavy on our hands, the notes gathered along with our specimens might be re-written in better literary style, and thus we would form a basis for something of interest to others as well as to ourselves, and should any of our fellow-collectors call upon us at any time for our notes on any particular species, we would have something which would be available for their use and not a chaotic mass of illegible materials. Every observer of nature should prepare all his notes as though they were being prepared for immediate publication, and then if his

materials happen to fall into the hands of others, in case of his death or other casualty, or by exchange, the results of his observations and studies will not perish with him. Some of the best papers lately published in the OÖLOGIST were from the materials gathered by the authors and left in shape to be used by others after their death.

I fear that there are too many collectors who have no desire that their observations shall be of benefit to others. In response to the frequently published calls for notes and data on certain species or from particular localities, how few are ready to contribute their mite to the common stock. There are note-books lying in undisturbed recesses which might reveal matters of interest to even the best informed ornithologists of the country if the contents of such books were brought to light. The greatest barrier to the more rapid advance of oölogical knowledge at the present time is the lack of full records from all sections of the country. The greatest need of ornithological study now is not the more rapid discovery of new species or more extended observations about the rare species, but fuller published facts about the commoner species, such as is contained in hundreds of the note-books whose owners never think of making public their records. We need more of such facts as were given us in a late number of the OÖLOGIST, in the article on the Spotted Sandpiper, by the gifted young naturalist whose observations were so suddenly terminated by accidental death. In the preparation of a modest work which I am ambitious enough to think will be worthy of publication when finished, I have been repeatedly struck with the meagerness of the published notes on many of the common species. Most of the accounts of birds are based on their behavior in eastern habitats. Notes from the Mississippi valley and from the west have only begun to appear, thanks to the

OÖLOGIST and kindred journals, and only after the publication of full notes from these regions can there be written a full descriptive ornithology of North America.

Hence we think that the winter work of the ornithologist should be largely in the way of disseminating the knowledge acquired in the collecting season and treasured in the note-books. Give others the benefit of your observations, even though they appear trite and common-place to yourself, and thus aid the progress of the science you love so well.

The fortunate possessors of large series of eggs of any species are in position to be of wonderful benefit to those who are in need of facts. There is a scientific value in a large series, only when the data are placed within the reach of students able to deduce the proper knowledge and to make it part of the common stock. There are many collections containing large series of eggs formed for their scientific value, from which science has never gained an iota of advancement. The facts about these large series should become matters of record and public examination. In the prosperous days of an ornithological and oölogical journal now extinct, there were published data of large series of eggs from the largest private collection in America, and thus that collection became of something more than mere private interest. Large series are nice to gaze upon and to show to the owners of less pretentious collections, but the collector of a large series has a responsibility resting on him which is only moved when he benefits the less fortunate collectors by his contributions to the appointed means of spreading the knowledge he has gained. I have read of collections containing hundreds of eggs of the Hawks and other Raptores, and yet no word of knowledge concerning the habits of these birds has issued from the collectors whose work

has been described. Not long ago I read in a back number of the "O. and O." of a "perfect collection" in a neighboring State, containing hundreds of Hawks' eggs, and yet when I began to search for data about the Red-tailed Hawk the available material was indeed meager and there was not a contribution from this "perfect collection." What a storehouse of materials within the grasp of that "perfect collector!" What matters it to you and to me how perfectly he prepares his specimens, even with his tools of his own make, if hundreds of such specimens are to lie where the world is none the wiser for such perfect work.

It is true that time and patience are necessary for the examination of hundreds of specimens and the recording of the ascertained facts, but why are such large collections formed except that science may be enriched and our knowledge extended? I have stated that one phase of the work of the ornithologist is apparent drudgery, and it is this part of the work that I had in mind when I wrote the above statement, but work is necessary to the advancement of any cause. It sometimes requires the hardest sort of work to secure our specimens, and we should not hesitate at the subsequent part of the work which means the advancement of the science for which we are really laboring. The leisure time of the ornithologist through the winter can be profitably spent in the study of his treasures, the careful recording of the knowledge thus obtained, and the publication of his observations for the benefit of others. Not the facts about the rare species only are needed, but the common everyday observations, such as all of us make and daily record about the behavior of the birds in which we are interested. Those who are fortunate enough to find the rare species will also remember their obligation, and thus all our feathered friends will receive their due share of attention.

I have wondered what would be the results to the advantage of ornithology if the facts locked or hidden in the thousands of cabinets in this country were carefully studied out by the owners. Suppose that the note-books of the thousands of collectors in different parts of North America should be studiously re-written in intelligible language and placed at the disposal of the leaders of the science, or that the facts of oölogy now lying dormant should be vivified and sent to the editors of the leading oölogical journals for use at their discretion and selection. What a wonderful impulse would be given to the progress of ornithology, and what a storehouse would be opened to supply the needs of the most yearning student of ornithology! Yet of the thousands who have well-filled cabinets and hastily-written note-books, how few there are who are really more than collectors of empty shells and cotton-filled skins, and who never aim to contribute anything whatever to the knowledge of the race. Let us hear from you.

P. M. SILLOWAY,
Roodhouse, Ill.

Albinism in Birds.

Albinism in birds is an unnatural condition of the plumage, resulting from an absence of coloring matter in the skin. This much we know and scarcely anything more. The primary cause and why some species of birds are more subject to it than others we have yet to learn.

The wisdom of classing all so called "abnormalities" as well as many odd and unusual color-variations of plumage, as "freaks of Nature" is, to say the least, questionable; for Nature will doubtless continue to further her designs, with which these differentiations of so frequent and constant an occurrence may have some connection.

Observations have proven that when

the albinistic condition of plumage exists on one nestling, it is usual for the remainder of the brood to be similarly affected. In connection with this other question naturally arise: What peculiarities exist in the organization of the parent birds? And is it the imperfect development of one or both sexes?

For some unaccountable reason or a combination of circumstances, the past season of '95 has produced a large number of anomalous objects in the state of Nature. From an ornithological standpoint we have had a number of abnormally large and small eggs, and frequent cases of albinism have been reported. Of the latter the most authentic instances are those of the American Crow and of that little pest, the European House (English) Sparrow.

Of the former species I can say little, for true to his cunning nature he and his twin brothers are still at large; but of the latter I shall relate all I have been able to learn as I think it is a subject of interest to all.

Throughout the summer frequent reports were made of pure white Sparrows in various flocks in different parts of the village. On the 31st of August a small boy informed me of one rescued by him, from the family cat, and furthermore of its general good health and beauty (with the exception of its tail of which it stood in some need, unless it could grow a new one.) Unfortunately I lacked the opportunity to go for this prodigy at once, and learned a few days later that through an unfortunate accident the bird again fell into the cat's clutches and this time it had apparently gone the way of its tail feathers.

However I was not to be disappointed for a gentleman stopping in another part of the town, generously tendered me another albino, which he had captured alive on the 4th of September. He informed me that this Sparrow was discovered by him, flitting about the yard from tree to tree. It seemed to be

a mark for all the other birds of the same species to peck at by reason of its oddity. While yet a very young bird it was a fairly good flyer, its unique plumage rendering it conspicuous and easily kept in view. He picked up a stick and followed it from tree to tree, endeavoring to mesmerize it by keeping his eyes constantly upon it. Apparently it at once discovered that it was being singled out from the general rabble (just as it had always been throughout its short existence) and became very uneasy and frightened, frequently looking over its shoulder at its pursuer until finally it missed a tree altogether and bringing up against the side of the house, was easily made a prisoner and placed in confinement.

Faithful to the instinct of true parents, the old birds came about and probably would have fed it but for their suspicions and fear of the shining brass cage hanging in the open air.

I carried it home in the evening of the 6th, it nesting quietly in my hand, and the next morning it was placed in a canary cage, but beat about so much upon the least noise that I feared it would injure itself.

Now that I had it under my own eye and care, I anticipated a thorough study of its peculiarities and mentally formulated a line of experiments to demonstrate the nature and degree of its defects in sight, hearing, etc., if possible.

As it would eat nothing, I was compelled to pry open its mandibles and force some bread crumbs down its throat. Being away from home the greater part of the day, on my return I learned that it had eaten nothing whatever, although it drank some water from a spoon.

Toward evening I placed the cage in the open air, suspended from a porch rafter; immediately I heard a scramble and before I could return it had squeezed between the bars and flew away, luckily I caught it a moment later on a rose bush.

Apparently it had fasted ever since placed in captivity and while it rested quietly in my hand I feed it bread crumbs soaked in water. During this operation it voluntarily opened its mouth for the first time and gave that unmistakable cry of *Passer domesticus*. Later I gave it seven house flies, which it would eagerly peck at but almost invariably miss by a quarter to a half an inch. Not only hitting on either side but above and below.

Owing to its nervousness when confined in the cage, I gave it the liberty of an unoccupied room, where it seemed well content hopping about the floor.

Darkness and strong light seemed to produce the same effect, both making it drowsy; the latter caused by the extreme weakness of its eyes.

In the brief time it survived it became very tame, hopping quickly toward me and perching on my finger when I whistled softly to it. It would allow me to carry it anywhere about the house, resting contented on my shoulder or perched on my finger, yet often executing a "right about face" with great dispatch when a slight noise was made in its rear.

While its hearing was acute, it was not unerring for the buzzing of a captive fly did not aid it greatly in its endeavors to secure the morsel. Its sight was very defective, small objects could not be clearly distinguished one half an inch from the tip of its beak and it was not sure of a large immovable object ten feet distant.

□ Aside from its delicate organization, the extreme nervousness and irritability to which it was subject, can be attributed in part to the Sparrow mob singling it out as apart and distasteful to them.

I also discovered on occasions, an indescribable aimlessness never before observed in the actions or manners of a bird. Perhaps something was wrong with its brain, at any rate at such times it strongly reminded one of a person weak in intellect.

When placed before a mirror it craned its neck toward its reflection and completely deceived attempted to sidle up to its supposed brother, fluttering to the floor in its eagerness to reach it.

During the 8th I fed it between thirty and forty house flies, seven sunflower seeds and three bits of gravel. The end is soon told.

On my return from a short walk in the afternoon of the same day, I was unable to find it anywhere in the room, but it was finally discovered between the folds of a quilting frame where it had crept to die. Upon dissection I found five flies, two bits of gravel and two sunflower seeds (the flies partly digested) in the *proventriculus* or true stomach, while the gizzard contained four whole sunflower seeds and the remnants of the shell and pulp of another, together with three bits of gravel. The two extra pieces of gravel were undoubtedly fed to it by the parent birds. In its weakened condition, the sunflower seeds had proved too much for the bird's grist mill.

It is pure white without a dusky mark upon it, straw-colored beak, flesh-colored tarsi, and eyes of deep pink, the pupil and iris indistinguishable. The skin is also perfectly white. Altogether a perfect albino.

Not possessing a series of skins of immature birds of this species, I am unable to compare measurements but feel sure my specimen is undersized.

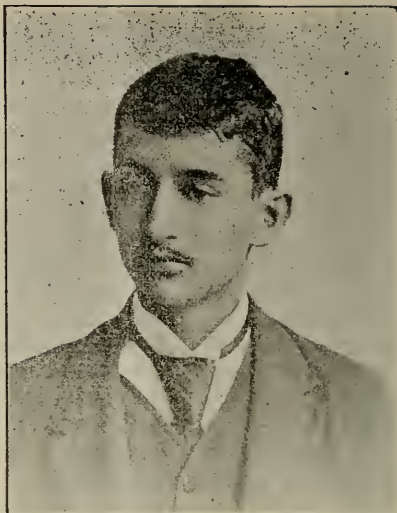
I became really attached to this truly beautiful little bird in the brief time I possessed it.

FRANK L. BURNS,
Berwyn, Penna.

William McClair.

William McClair died Wednesday, May 15, 1895, at his home in Ballston Spa, N. Y., after a short illness of quick consumption.

He was born Jan. 20, 1874, at Ballston Spa. The writer first formed his



acquaintance at the Ballston High School, and soon became his firm friend and companion in many a day's ramble. He was an ardent lover of nature's works, in particular the birds, and spent much of his time with them in their haunts.

His particular hobby was collecting Hawks' eggs, annually visiting and levying upon them. Hawks' eggs of his procuring are scattered, so to speak, all over the United States, from Maine to California, in the cabinets of brother collectors, by whom he was always known as dealing in a considerate, painstaking and liberal manner.

His collection numbered about three hundred and thirty species of eggs, in singles. He did not believe in the scientific (?) practices of taking all the eggs and precluding whole generations of birds.

He was of a quiet, retiring, unobtrusive disposition, unselfish to a fault, kind hearted and gentle. His friendship was highly valued for it was true friendship, and his loss will be deeply felt by all who knew him. An expression heard on every side testifies truly of him, "He was a good boy!"

B. A. G.

The above should have appeared in October OÖLOGIST, but through an oversight was omitted.—ED.

THE OÖLOGIST.

A Monthly Magazine Devoted to

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FRANK H. LATTIN, Editor and Publisher.
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*. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

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Subscriptions to the Oölogist will be accepted at 50 cents, or for \$1 the Oölogist will be sent one year and you can select \$1 worth of the premiums offered in premium list supplement, in either case the exchange coupon is mailed you.

The popular Query and Jotting columns and contest scheme will be resurrected in February issue and perhaps other equally attractive features added.

Index to Vol. XII will be mailed with February issue.

February issue will be mailed during the *first* week of the month. Copy for same must be mailed at once.

All letters and subscriptions received during the past two months have been acknowledged and premiums forwarded. If you have not heard from the one which you mailed or have heard from it through another party, other than "Lattin," please advise him by return mail, addressing plainly and in full, Frank H. Lattin, Albion, Orleans Co., N. Y., and the matter will be investigated.

If you have not already renewed your subscription to the Oölogist for 1896, do so by return mail, accepting either the 50c or \$1 offer.

New subscribers to the Oölogist are always in demand and during the month of February the publisher of the Oölogist will give 50 cents worth of premiums for each new subscriber a present subscriber may send him. This 50 cts. worth of premiums must be selected from the list given on the little circular headed "Lattin will send you a Christmas Present," the same as given on advertising pages ix and x of December Oölogist, and 10c must be added to cover the mailing expenses of the present. Remember the new subscriber can accept either the 50c or \$1 subscription offer and will secure all of the perquisites connected with the same and this premium is an additional offer on our part made to present subscribers who will assist in enlarging the subscription list of our little monthly.

Michigan Ornithological Club.

The annual meeting of the Kent Ornithological Club was held at Grand Rapids, Mich., December 12th.

At this meeting the name of the club was changed to the Michigan Ornithological Club and the Constitution was revised to admit active and associate members throughout the State.

The following officers were elected

for 1896: President, A. B. Durfee; vice-president, R. R. Newton; secretary, W. E. Mulliken; treasurer, Prof. C. A. Whittemore; librarian, Leon J. Cole.

The following were elected active members: L. Whitney Watkins, Manchester; Dr. Morris Gibbs, Kalamazoo; T. L. Hankinson, Hillsdale; W. A. Davidson, Detroit; Prof. C. A. Whittemore and Hattie M. Bailey, of Grand Rapids.

All Michigan ornithologists should address the secretary at 191 First Ave., Grand Rapids, Mich., for particulars.

Northwestern Ornithological Association.

The second annual meeting of the Northwestern Ornithological Association was held at Portland, Oregon, December 27, 1895.

The forenoon was spent in transacting business of the association. In the afternoon interesting papers were read, and a most enjoyable time reported by those who were present.

The election of officers resulted as follows: President, William L. Finley, Portland, Ore.; first vice-president, Ellis F. Hadley, Dayton, Ore.; second vice-president, Guy Stryker, Milwaukee, Ore.; secretary, Arthur L. Pope, McMinnville, Ore.; treasurer, D. C. Bard, Portland, Ore.

Associate members are admitted to the association from any part of America. For particulars address the secretary at McMinnville, Oregon.

Neurology.

Monmouth H. Greene, aged 18 years, son of Mr. and Mrs. Orlin H. Greene, died at his home in Atlantic Highlands, N. J., on Nov. 21st, of hasty consumption.

He requested his mother, a few days before his death, to write, "after he had gone," to the publisher of the OÖLOGIST and request him to give notice that to

all whom he was indebted for eggs to please send in their accounts at once to his brother, Harold A. Greene.

Charles W. Wells died on Dec. 20th, at his home in Granville, O., after an illness of fifteen months. Charlie was an enthusiastic collector, making oölogy his specialty; has been a subscriber to the OÖLOGIST for several years and was well known, through correspondence, to many of its readers.

The Bond Which Unites Us.

Mr. Editor:

It is agreeable to know that there are hundreds of lovers of Nature who are keeping up their interest in our special subjects, although they are not known to the readers of the OÖLOGIST. It is pleasing to know that there are recruits coming into our ranks, who will yet make their marks as scientists; and it is doubly pleasing to hear through the columns of our medium from long silent, yet not forgotten writers of season's past.

The interesting remarks "From a Rusty Pen" in your October issue particularly pleased me, and your note regarding the distant subscriber (C. H. Hall, Fort St. Michael, Alaska) led me to think of the wide spread and increasing influence of your paper.

The obituary of our fellow collector, R. A. Fitch, causes us to think of the uncertainty of life and how suddenly one may be taken from this world of troubles and pleasures. Surely we can say that there is a bond which unites us, and may uphold our standard and quote the words of Bacon:

"I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereunto."

M. G.

AUGUST-SEPTEMBER CONTEST.

Twenty-three Judges.

1. Dragging for Bobolinks. 105.
 2. Notes on the Least Bittern. 48.
 3. The Ring-necked Mongolian Pheasant. 45.
 4. Nesting of the Great Crested Fly-catcher. 42.
 5. A Collecting Trip near Monterey, Cala. 31.
- None of the Judges named the prize-winning articles in their exact order.
Prizes were mailed on October 25th.

You Are a Judge.

Your decision must be mailed us not later than the 20th day of February. Write on back of a postal card the five articles which you have decided to be the most valuable, instructive and interesting in the December '95 and this January '96 numbers of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

A Judges' prize will be awarded consisting of \$6 in specimens or \$4.50 in instruments, supplies or publications or \$3 cash. This prize will be awarded to the Judge who names the winning articles and in their exact order. In case more than one Judge names them correctly this prize will be equally divided among the number.

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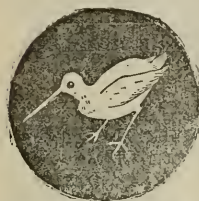
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"AUKS" Wanted.—I will allow 30c each for any back number of the "Auk" you may have, if in good condition and sent prepaid. You to take your full pay in Bird skins, Eggs, Shells (showy or scientific), Corals, Echinoderms, Fossils, Minerals, Indian Relics, Curios or Novelties as listed in the Premium List Supplement. I can also use on same terms Nos. 1 and 2 of NATURAL SCIENCE NEWS at 10c each and the following No's of the OÖLOGIST at prices quoted: June, 1888, 25c; July-Aug., 1886, 15c; Jan.-Feb., 1887 or Dec., 1886 with same attached, 20c; June-Sept., 1887, 15c; Apr., 1889, 12c. All must be complete, clean and in good condition. I will also accept back No's of the *Ornithologist* and *Oölogist* or *Nidologist* any issue and in any quantity at 5c per copy on same terms. I can also use books on subjects pertaining to Natural History if in good condition and cheap, also A No. 1 sets of eggs with data at ½ "Standard" rates. Lists of books and eggs must be submitted for my selection or approval before sending. Address at once, FRANK H. LATTIN, Albion, N. Y.

DENTAL CHAIR;—2d-hand "Morrison" in good condition will sell cheap or possibly exchange—valueless to me. FRANK H. LATTIN, Albion, N. Y.

BOOKS. I want good clean second-hand copies of any Book which I offer for sale in my new (May issue) **NATURALIST'S BULLETIN.** Look over your old Books and send me a list of the ones you will "swap," stating lowest exchange price and what you can use for the same. FRANK H. LATTIN, Albion, N. Y.

TO EXCHANGE.—An International Type-Writer, almost new, cost \$100, for best offer A. M. EDDY, Albion, N. Y.

An Easter Edition

OF 25000 COPIES OF THE

Natural Science News

Will be printed during the latter part of March and mailed not later than April 10th.

A copy will be mailed to every known Naturalist and Curio Collector in America and to over 1000 selected live ones in Foreign countries.

ADVERTISING RATES will be advanced for this Easter edition as follows:

WANT, EXCHANGES and FOR SALE Notices will cost **50cts per 35 words**, 1c per each additional word, each figure counting as a word.

Coupons given with subscriptions will be honored in payment for notices in these columns in the Easter edition at 25cts each.

ADVERTISEMENTS will be taken at,

10 cents per nonpareil line.	12 lines per inch.
120 lines per column.	360 lines per page.

The minimum price for a single advertisement in the Easter edition will be 50c. A 5 line advertisement or under will cost that amount.

Not to exceed one full page of space will be accepted from any single person or firm.

No **DISCOUNTS** will be allowed at this, less than nominal, rate. Hence a

5 line or less advertisement will cost \$	50
12 line (1 inch) advertisement will cost \$1	20.
60 line (1½ col.) advertisement will cost	6 00.
120 line (1 col.) advertisement will cost	12 00.
180 line (1½ page) advertisement will cost	18 00.
360 line (1 page) advertisement will cost	36 00.

Cash Must Accompany Order

Unless you have a satisfactory rating with either Dun's or Bradstreet's Commercial Agency, or can give me satisfactory Bank Reference, or have already had sufficient dealings with me to satisfy me of your financial reliability, the cash must accompany your order. If, however, you have either of the above three requirements and your order is for space amounting to over \$2.00 I will neither require nor ask for a single cent's pay until I prove to you

1st—By my printer's affidavit that I have issued 25,000 copies of the Easter edition of **NATURAL SCIENCE NEWS**.

2d—By my P. O. postage receipts that I have mailed at least 20,000 of the number.

Rates to regular advertisers **WILL NOT BE ADVANCED**. I will not, however, allow them to use more than the *average* number of lines which they agree to use in each issue for the entire year at this heavy loss to myself. Should they wish to increase the size of their regular advertisement, however, they can do so at the regular rate, for this issue, of 10cts per line.

First and Last Pages

Are always considered more desirable by many, although the Publisher knows that *every* page in this issue will be "religiously" read. However, if you consider the first or last page preferable and are willing to back your preference with the "price," I will sell the space on these pages as follows:

On the first page: Small "Want, Exchange and For Sale" ads. on **FIRST PAGE** will cost \$1.00 per notice of 35 words or under. Exceeding 35 words, 3 cts per each additional word.

The Last Page will be sold to a single party or firm and will not be divided. My price for the same will be \$50 net.

This Easter issue is sure to prove a "howling success" and it is my desire to have you "in it" and share in the fruits thereof.

Expecting to hear from you at an early date, providing you wish to share in the success of the issue, I remain, as ever

Faithfully,

FRANK H. LATTIN, Publisher, ALBION, N. Y.



O O L O G I S T.

Monthly.

VOL. XIII. NO. 2.

ALBION, N. Y., FEBRUARY, 1896.

WHOLE NO. 124

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales." Inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

"DEALERS" can use these columns at *Regular Advertising rates, only.*

Strictly First-class specimens will be accepted in payment at one-half list rates.

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

\$20.00 WORTH of Pacific coast bird skins for a copy of Coues' Key or Ridgway's Manual. Photo burnisher and 88 S. & W. reloading tools wanted. GEO. G. CANTWELL, Puyallup, Wash.

SWAP OR SELL—5x8 camera, minerals, fossils, etc., natural history papers. No trash. Send stamp for list. R. M. DALRYMPLE, Wash. D.

WANTED:—Partner to take an interest in patent of entirely new Oologist Instrument, which removes contents from shell quickly and carefully without breaking it, even if incubation is far advanced. Answer immediately. RUSSELL KENNEDY, New Castle, Lawrence Co., Pa.

FOR SALE:—A collection of 40 singles with data amounting to \$8.50, will sell for \$1.50. One of 90 singles without data amounting to \$13.25, will sell for \$2.25. Both for \$3.50. A "snap." GEO. W. DIXON, Watertown, S. D.

WANTED:—Good pair of climbers, Lattin's preferred. Can give Apgar's Key, Vols. I and II of Oologist and remainder in magazines, books or cash. WARREN SMITH, Fairmont, Cuy Co., Ohio.

TO EXCHANGE:—Five vols. of American Field of the years '85, '86, '87, '89, '90 for best offer in first class birds eggs. R. P. DAVIS, Grinnell, Iowa.

WANTED:—The OOLOGIST and YOUNG OOLOGIST to June, '91; Vol. I No. 1 the *Naturalist*, Texas; first two vols. the *Nidologist*. For above or part of them I will give good exchange in eggs, minerals, fossils, Indian relics, books or mounted birds. GEO. W. DIXON, Watertown, S. D.

FOR BEST CASH OFFER, I offer elegant dust-proof walnut case for eggs; also many ornithological papers, Oologist from 1886, *Oologist and Ornithologist* from 1888, *Auk*, *Hawkeye Oologist and Ornithologist*, etc. Send for description and complete list. W. E. PRATT, Lake Forest, Illinois.

WANTED:—Will pay cash for all kinds of U. S. stamps. Send stamps and I will send money by return mail or send list and receive prices paid. Always send stamp for return postage. GEO. W. DEAN, Wick, Ohio.

NOW ON HAND:—Fresh skins of Snowy Owls, Arctic Horned Owls, Pine Grosbeaks, etc. Collectors wanting good skins of Arctic birds will find us able to supply many rarities from time to time. OLIVER SPANNER & CO., Yonge St., Toronto, Canada.

BIRDS IN THE MEAT of this locality furnished. How to write on iron and glass indelibly; both receipts for a fine U. S. cent or half cent prior to 1845. ARTHUR B. ROBERTS, Weymouth, Ohio.

EXCHANGE:—NATURAL SCIENCE NEWS, Vol. I for the OOLOGIST, Vol. XII or XI worth of good sets. J. B. HASKELL, Decorah, Ia.

WANTED:—A good hunting knife and a fish spear. Have papers and Indian relics to exchange. ALBERT B. FARNHAM, Benning, D. C.

CAMERA WANTED:—4x5 film negative (or glass), bird book, eggs and fresh water Unios. Offer 5 shot 38 caliber gun, E flat Cornet, Osprey skin, common sets and fresh water shells. C. F. STONE, Branchport, N. Y.

WANTED:—A pair of Lattin's Climbers, strapped preferred. Will give for same a nickel case watch—cost \$4.00 when new. L. B. GILMORE, Ducat, Wood Co., Ohio.

HAVE THE FOLLOWING singles to exchange for common sets, A. O. U. Nos. 316, 388, 406, 412, 477, 495, 498, 560, 581, 595, 704, 705, 725, FRED BLACK, 904 Osborn St., Kalamazoo, Mich.

EXCHANGE:—I have 10 varieties of strawberry plants to exchange for Indian relics or minerals. Z. T. SMITH, Upper Sandusky, O.

CHOICE sets of California Brown Pelican and California Thrasher for exchange. CLAUDE BRALY, Helix, San Diego Co., Cal.

SHOT-GUN AND RIFLE combined, Boston musical baritone horn, mounted birds and shells for a good collecting gun or Ridgway's Manual. VERDIE BURTCHE, Penn Yan, N. Y.

VOL. XII of the *Auk* complete to exchange for best offer. Desire especially Indian relics. G. FORD AXTELL, Box 50, Howell, Mich.

ASHY PETREL skins with sets of same, also many other sets to exchange for good 12 gauge double barreled, breech-loading shot gun. Want good description of gun. HARRY R. PAINTON, College Park, Calif.

WANTED:—10 14, 23, 84, 152, 155, 162, 163, 164, 180, 266, 274, 295, 328, 334, 357, 359, 375c, 378a, 379, 395, 402a, 40*, 414, 421, 434, 445, 453a, 459, 471, 474, 474d, 478a, 479, 482, 489, 490, 540b, 551, 567a, 567c, 567a, 590, 614, 631, 715, 727a, 735b, 741, 752, 753. Sets, Nests: where practicable. Single. Bald Eagle. P. B. PEABODY, St Vincent, Minn.

JUST THINK!—Twenty varieties of tickets from the World's Fair for only 12c. Curiosities in exchange for stamps, roller skates, tennis racket, or sporting goods. CLIFTON A. FOX, 525 West 61st St., Chicago, Ill.

WE RECEIVE weekly birds from the north, when we can supply in fresh skins with full data, American Goshawk in full plumage. Hawk Owls, Great Gray, Saw-whet, Ptarmigan's, Canada Jays and many others. Correspondence solicited. OLIVER SPANNER & CO., 358 Yonge St., Toronto, Canada.

TO EXCHANGE:—Two mounted DEER HEADS, value \$32, for desirable eggs in sets. The Buck is a fine 3-prong and in excellent shape. The Doe is on shield. Would take part in desirable skins. LATTIN'S STANDARD rates. Address ERNEST H. SHORT, Albion, N. Y.

FOR SALE:—A large list of fine fossils, minerals, eggs in sets and mounted birds at 1/3 rates. send stamp for list or lists wanted, if interested. It will pay you to get my bargain lists. GEO. W. DIXON, Watertown, S. D. EN

FOR EXCHANGE:—Maynard's "Butterflies of North America and Freuch's "Butterflies of the Eastern United States," Vols. 24, 25, 26 and 27 of the "Canadian Entomologist" and Lepidoptera in papers from North and South America, Europe and Africa for first-class sets with data or fine bird skins. WALTON I. MITCHELL, 54 Summit Ave., St. Paul, Minn.

H. H. T. JACKSON of Milton, Wis., has a full-blood registered male fox hound to "swap" for A1 eggs in sets with data.

TO EXCHANGE for any five numbers of Vol. I or II of *Nidologist*:—No. 1, Vol. III; No. 2, Vol. IV; No. 9, Vol. VI; and Nos. 1 and 10, Vol. X of the *Oologist*. All first class. SIDNEY H. MANN, Canton, Ill.

GIVEN AWAY:—A \$2.00 piano and \$100.00 bicycle for the best suggestion for plan of a five-room house. Send 10c for descriptive circulars and details for competition. THE INTENDING BUILDER, (Architectural Department), Buffalo, N. Y. F2t

OOLOGISTS WANTED:—I will give 25 cts. each in exchange (selections to be made from Premium List Supplement) for any of the following issues of the *Oologist* in good condition: July-Aug., 1886; Jan.-Feb., 1887 or Dec., 1886 with same attached: Apr., 1889. FRANK H. LATTIN, Albion, N. Y.

WANTED:—To sell the below named sets with data at prices named—Nos. 452 1-5, 25c; 387 1-3, 15c; 488 1-4, 10c; 610 1-3, 25c; 198 1 3, 15c. W. L. FOXHALL, Tarboro, N. C.

FOR SALE OR EXCHANGE:—Birds in sets and singles for eggs in sets, climbing irons and kodak. FRANK H. BOTSFORD Lyndonville, Orleans Co., N. Y.

TO EXCHANGE:—A good Anthony Premier Camera and complete outfit for good microscope; coins, volumes of magazines, etc., for Packard's "Guide to Insects" and Natural History Specimens. EDWIN H. DRAPER, 6700 Wright St., Chicago, Ill.

WANTED:—To exchange choice singles of No. 79 and skins of Bachman's Warbler for U. S. or desirable foreign stamps. Catalogue prices to govern. Send list of stamps. J. W. ATKINS, Key-West, Fla.

FOR EXCHANGE:—A taxidermist's collecting gun with shells and instruments for Coues' Key, camera, western sets or skins or small rifle. A. WELLS KIRKPATRICK, 212 Ashmont St., Dorchester, Mass. O.

FOR SALE:—Coast Birds in the flesh. Vols. XI and XII of the *Oologist*, Vols. IX and X of *Ornithologist and Oologist*, Vol. I of the *Museum*. ALVAH G. DORR, Bucksport, Maine. J2t.

GOVERNMENT Reports, transactions of scientific societies etc. for other scientific books. A No. 1 eggs or postage stamps, U.S. preferred. EGBERT BAGG, 191 Genesee St., Utica, N. Y. O.

WANTED:—Collections of eggs in sets or singles. Persons having such for sale cheap send list and lowest price. Southern eggs in sets to exchange in the summer. DR. M. T. CLECKLY, 457 Greene St., Augusta, Ga. Fo 2t, 53-2t

TO EXCHANGE:—A gold-filled American style hunting case watch, gents size; case warranted for 20 yrs., works 10 yrs. Will exchange for \$30.00 worth of good sets. GEO. W. DIXON, Watertown, S. D. FO 2t

"THE AUK," the first 8 Vols.; *Bulletin of the Nuttall Ornithological Club*, 9 Vols.; also the first 5 Vols. of *Ornithologist and Oologist* wanted. Will pay cash. F. C. KIRKWOOD, Box 361, Baltimore, Md. JO & 52-2t.

FOR SALE:—The "Owl" season is here and you want a good pair of climbers. That is what the "All Steel Climbers" are. Price with straps, \$1.00; without, 85 cts. Address R. C. ALEXANDER, Plymouth, Mich.

WANTED AT ONCE:—Fine skins of Marbled and Hudsonian Godwits and Eskimo Curlew. Also good sets of 12a, 264, 277a, 343 417, 622b, 715 and 741. Can offer in exchange fine sets, fossils, minerals, Indian relics, books or mounted birds. GEO. W. DIXON, Watertown, S. Dak.

WANTED:—A good kodak; for which I offer good exchange in fossils, minerals, Indian relics, polished agates, sets and mounted birds. Will also exchange any of the above for good cloth bound books. GEO. W. DIXON, Watertown, S. D.

WANTED:—Eggs in sets with data. I offer back numbers of the *Oologist* and other ornithological journals and eggs in sets and single. NEIL F. POSSON, Medina, Orleans Co., N. Y.

PERSONS having for exc. eggs in sets with complete data, which have been taken in this county write me. NEIL F. POSSON, Medina, Orleans Co., N. Y.

ANIMATE CREATION, 60 parts 4to, 32 pages each, 30 oleographs, 60 full page engravings, many hundreds of other illustrations, 20 parts (Mammals) bound, cost \$18.00, never used, will take \$5.00. Extra large wild cat skeleton (rough) \$2.00. J. J. WIRZ, Taxidermist, Augusta, Ga. 55-2t O.

WANTED Auks:—Complete file *Archaeologist* (except No. 1 of Vol. II), 17 *Oölogists*, 5 *Ornithologist* and *Oölogists* for 1891 for best offer. Address V. H. CHASE, Wady Petra, Illinois. 55-2t O

RESURRECTION PLANTS:—Have just received a new stock of this wonderful plant. all A No. 1, the regular 25c grade; but while they last will sell at 15c each; 2 for 25c; 5 for 50c; 12 for \$1.00; 100 for \$5.00. *Prepaid* at these prices. FRANK H. LATTIN, Albion, N. Y.

"PLAIN HOME TALK and Medical Common Sense," Foote. A Standard Family Medical Book, nearly 1000 pages, new, cost \$3.25. Will exchange for desirable sets or specimens. What offers? FRANK H. LATTIN, Albion, N. Y.

"NATURAL SCIENCE NEWS," Vol. I complete. Less than ten complete vols. left. Will send you one for only \$1.00. Complete your files. Will furnish Nos. 1 and 2 at 10c each. All others 5c each or in lots of five or more 4c each, or ten or more 3c each. (Nos. 1 and 2 are always 10c per copy net.) FRANK H. LATTIN, Albion, N. Y.

MEXICAN WATCHMAN'S WHISTLE:—Made of clay, new, a great novelty and curio, a regular ear-splitter. Just the thing and very appropriate for a collector's whistle. Prices prepaid, each 15 cts.; 2 for 25c; 5 for 50c; 12 for \$1.00; 100 for \$6.00. FRANK H. LATTIN, Albion, N. Y.

SKINS and MOUNTED BIRDS, for sale or will give for good exchange in desirable sets or singles with complete data, or ornithological publications. Correspondence solicited. A. P. and A. P. & D. J. SIMMONS, 611 Jacob St., Troy, N. Y. O.

CASTS OF LARGE & RARE BIRDS EGGS: I will sell fine casts of the following eggs at these very low rates: Great Auk, 60 cts.; Rheas, 45 cts.; Emu, 45 cts.; Ostrich, 45 cts.; Golden Eagle, 50 cts.; Bald Eagle, 45 cts. Any of the above sent post-paid upon receipt of price. *Apysomis*, \$2.50; Moa, \$1.75; by express at purchaser's expense. All of these casts are perfect imitations and no collection should be without them. N. P. BRADT, Hindsburgh, Orleans Co., N. Y. 56-2t, O

BOOKS. I want good clean second-hand copies of any Book which I offer for sale in my new (May issue) NATURALIST'S BULLETIN. Look over your old Books and send me a list of the ones you will "swap," stating lowest exchange price and what you can use for the same. FRANK H. LATTIN, Albion, N. Y.

PUBLICATIONS wanted: During February I will allow the following prices for numbers named of the following publications in exchange. *The Auk* Vol. I ('84) and II ('85) any number and Vol. IV ('87), No. 2 (April), 75 cts each; *Nidologist*, Feb. '94 and April '94 at 10 cts each; *Oölogist* for Jan. '95 at 5 cts each.

FRANK H. LATTIN, Albion, N. Y.

OPALS, Minerals, Cut Gems and Natural History Specimens. Will buy, sell or exchange. List for stamp. ROBERT BURNHAM, 15 Chestnut St., Providence, R. I. 54-25t

"AUKS" Wanted.—I will allow 50c each for any back number of the "*Auk*" you may have, if in good condition and sent prepaid. You to take your full pay in Bird skins, Eggs, Shells (showy or scientific), Corals, Echinoderms, Fossils, Minerals, Indian Relics, Curios or Novelties as listed in the Premium List Supplement. I can also use on same terms the following Numbers of the *Oölogist* at prices quoted: June, 1888, 25c; July-Aug., 1886, 15c; Jan.-Feb., 1887 or Dec., 1886 with same attached, 20c; June-Sept., 1887, 15c; Apr., 1889, 12c. All must be complete, clean and in good condition. I will also accept back No's of the *Ornithologist* and *Oölogist* or *Nidologist* any issue and in any quantity at 5c per copy on same terms. I can also use books on subjects pertaining to Natural History if in good condition and cheap, also A No. 1 sets of eggs with data at 1/2 "Standard" rates. Lists of books and eggs must be submitted for my selection or approval before sending. Address at once FRANK H. LATTIN, Albion, N. Y.

FOR SALE OR EXCHANGE.—Malachite, Crysocholla, Chalcedony, Quartz, Azurite, Monazite and Frankine, Microscopic slides, Infusorial earth 100 localities, Trap-tufa and rocks for sale or exchange for other minerals or Microscope slides or Infusorial earths PROF. ARTHUR M. EDWARDS, Newark, N. J. O. & N. tf

WANTED.—Meteorites, New and; undescribed ones especially desired. Good prices paid for complete "falls" or "finds." EDWIN E. HOWELL, 612, 17th St. N.W., Washington, D.C.

NOTICE:—I have a beautiful brand new International Teacher's Bible to exchange for mammal and bird skins. Write for list of religious books. S. P. HARWOOD, 50 W. Mt. Royal Ave., Baltimore, Md.

RARE COINS:—Will exchange a collection of rare old Canadian tokens, hard time's tokens (U. S.), etc., for good double gun or good camera with outfit. C. W. WEST, 520 North Academy St., Galesburg, Ill. 56-2t, O.

FOR SALE. Extra large, finely mounted Elk Head. Antlers measure 3 feet 8 inch, elegantly mounted on walnut shield. \$100. Elk Head Photo sent for 10 cents. Short-eared Owl, mounted, \$2; wings spread, \$2.50. Cinnamon Teal, mounted dead game, \$3. Red-head, dead game, \$3. All bargains and first-class work. Very rare, Datatare, Hindoo Idol, six-headed, carved in white marble from Bombay, India, \$5. Vishnu Idol, smaller, \$3—painted and decorated in gold leaf.

E. W. CURRIER, Taxidermist, 11. 120 Sutter St., San Francisco, Cal.

FRANK B. ARMSTRONG,

TAXIDERMIST,

and Collector and Dealer in

Bird and Mammal Skins,

Birds Eggs in fine sets, Mounted Birds and Animals.

BROWNSVILLE,

TEXAS.

When answering advertisements always mention the "OÖLOGIST,"

THOUSANDS OF OLD BOOKS have accumulated in the libraries of our public institutions, and those of prominent public men, both in duplicate and otherwise. They cost them nothing and oftentimes are valued accordingly. They are, however both valued and desired by specialists and parties interested. Perhaps you or your friends may have some of the identical volumes which I desire, crowding library shelves or stowed away in garrets, doing nobody any good; but had I them I would not only appreciate them but might know of a dozen others who would do likewise. Look over my list of wants and if you have anything I desire write me, stating what you desire in exchange, and perhaps we can arrange an exchange which will be advantageous to each. I will exchange for single volumes—but the larger the exchange the better. Address,

FRANK H. LATTIN, Publisher, ALBION, N. Y.

I WANT:

Annual Reports and Bulletins of U. S. Geological Survey, with F. V. Hayden in charge.

Reports of Wheeler's U. S. Geological Surveys W. of the 100th Meridian.

Reports of King's U. S. Geological Exploration of the 40th Parallel.

Annual Reports of Bureau of Ethnology.

Annual Reports of U. S. Geological Survey.

Natural History of New York.

Smithsonian Contributions to Knowledge.

U. S. Reports on Entomology Insect Life.

I also desire second-hand copies of any standard book reports or publication devoted to Ornithology, Oology, Geology, Mineralogy, Paleontology, Zoology, Conchology, Botany, Microscopy, etc., etc.

The following Books, etc., I especially desire at once:

Botany.

Any of Gray's or Wood's Text-Books and Publications.

Lesquereaux & James, "Mosses."

Tuckerman's "Lichens."

Goodale's "Wild Flowers."

Hervey's "Sea Mosses."

Sargent's "Silva of N. A."

Hough's "Am. Woods."

Geology, Mineralogy and Paleontology.

Any of Dana's, Winchell's, Miller's and Geikie's Works.

Conchology.

Any of Tryon's, Sowerby's, Gill's or Woodward's Works.

Entomology.

Any of Packard's or Comstock's Books.

Any of Maynard's, Edward's or Scudder's Works on "Butterflies."

Ornithology, Oology and Taxidermy.

Works by any of the following:

Baird, Bendire, Brewer, Brewster, Cassin, Chapman, Cory, Coues, Davie, DeKay, Fisher, Gentry, Goss, Hornaday, McIlwraith, Maynard, Mlnot, Nuttall, Nehrling, Raine, Ridgeway, Shufeldt, Studer, Warren, Wilson.

Also back numbers or volumes of any of the following publications:

"Auk," "Ibis," "Ornithologist and Oologist," "Nidologist," etc.

I OFFER:

I can offer in exchange for any of the above, either in large or small lots, collections scientific for teaching, study or museum purposes, or showy for decorative or ornamental purposes, in any of the following departments: Bird skins, bird eggs, minerals, fossils, shells, corals, Echinoderms, Indian relics, (modern or stone age,) etc., etc.

I can also give a complete stock or outfit for a Fair Exhibit or Summer Resort "lay out," ranging in value anywhere from \$10 to \$1,000, consisting of shells, curios, specimens, souvenirs, novelties, etc., etc. (I have sold \$50,000 worth of these goods during the past ten years)

I also offer about 100 cloth bound books on miscellaneous popular subjects,

About 200 paper cover novels and pamphlets.

One set of 86 Vols. of Penna. Geological Survey Reports.

Rowell's '95 Newspaper Directory.

Coues' "Key to N. A. Birds," Ed., 1872.

Maynard's "Birds of Eastern North America," (lacks 16 pages.)

"Institutiones rei Herbariæ," 3 Vol., 1719.

3 old books valued at \$3, \$5 and \$25 resp. and dated 1747, 1665 and 1580.

Buel's "Sea & Land" and "World's Wonders."

1 Vol. each Geology and Wis. curious and Owen's Geological Survey of Wis., Iowa and Minn.

Goldsmith's Natural History.

I also have a \$25 Materia Medica collection, for students in Pharmacy and Medicine.

A new Surgical Chair.

A Novelty Printing Press.

Fishing Tackle, a large assortment of articles required for every day sport.

About \$50 worth of assorted Games, Tricks, Novelties, etc., such as I formerly used for premium purposes.

Advertising space in NATURAL SCIENCE NEWS or the Oölogist.

New No. 2 Kodak.

A Seven-foot Shark.

Any of the articles offered as premiums on last page of No. 54 of NATURAL SCIENCE NEWS.

23 Vols. "Harper's Monthly," bound in Emerson's patent binders, cost \$56.

THE OÖLOGIST.

VOL. XIII. NO. 2.

ALBION, N. Y., FEBRUARY, 1896.

WHOLE NO. 124.

My '95 Collecting Trip in Penobscot Bay.

June 22, 1895, found me established in pleasant quarters, with a private family at Sunshine, Deer Island, Maine and provided with every comfort that could be furnished by a genial host and his thoughtful wife. From these headquarters, I intended to take a sailboat on pleasant days, and make neighborly visits to the various seabirds which nest annually in great numbers on various small outlying islands.

The next day was Sunday so I was obliged to wait until Monday, the 24th, before starting to do any collecting. On arising Monday morning, I found a dense fog enveloping everything outdoors, and thought with dismay "This dishes collecting for today;" for I did not then fully appreciate the marvelous skill and intuition by means of which the Deer Isle sailors can navigate their boats in the densest fogs:

While disconsolately surveying the foggy landscape, I was much surprised to see Captain Conary, my boatman, approaching with shot gun and supplies in hand as if he proposed to go on a days sail.

"All ready for a visit to Trumpet Island," he queried on nearing me.

"Yes, if you think you can find it in this fog," I replied.

He thought we could find the island some way so I at once gathered my collecting apparatus, together with a bountiful lunch thoughtfully provided by my hostess, and we were soon seated in a commodious sailboat which moved rapidly along under the impetus of a fair breeze. We were, rapidly nearing

our destination, for which Captain Conary steered a straight course in spite of the dense fog, but the wind finally failed us and the boat lay becalmed. Luckily the fog lifted at this time, and revealed Trumpet Island some distance from us.

I at once decided to row to the island in the peapod which was towing at the stern of our boat, leaving the captain to follow in the sail boat as soon as a breeze came.

For the benefit of the uninitiated, I will explain that a peapod is a row boat, pointed at both ends and comparatively flat-bottomed; such boats are almost impossible to capsize, so they are much used by the fishermen in visiting and hauling their lobster pots.

After half an hours labor with the oars, I was within a few rods of the islands, for there are four of them near one another. Trumpet Island is the largest of these, and it is connected with Barge Island, the next largest, at low tide. Off the point of Barge Island lies Ship Island and a small grassy ledge of which I do not remember the name.

The Common Terns began to rise from these islands by hundreds and to fly screaming overhead. They seemed most numerous on Trumpet Island so I landed there, and at once shot a few of the birds before they should get too wild. Six birds were obtained, all being *Sterna hirundo*, so I was disappointed as I had hoped to obtain the Arctic species here. I did not see any Arctic Terns during my visit to this place, although a party who visited Ship Island in '95 found a few pair nesting there.

Prof. E. F. Hitchings and others, who visit these islands nearly every season, have since informed me that they also have taken skins and eggs of Common Terns only, so the Arctic Terns must have sought other nesting places of late years.

After preparing the birds I had shot, so I could transport them safely, I started to collect a few of the handsomest sets of eggs. The nests were placed everywhere on the ground above high tide level, being scattered over the surface of the entire island. The great majority of the eggs were deposited in slight hollows in the ground, which were dug by the birds, but a few nests were fairly well constructed of dry grass. Many sets of two eggs were seen; a majority consisted of three, while a few were of four and five. I have a set of five all alike in color and markings; without doubt these were the product of one bird. Six eggs is the largest number I have ever known to be found in one nest; these were of two styles of markings, and beyond a doubt laid by two birds. Three eggs is the normal complement in most cases, but in cases where the birds have been often robbed the third or fourth laying will sometimes consist of one egg only.

A party who visited this island in August '95 reported nests containing one or two eggs at that late date while young birds in the down were reported as common.

When I had collected a few sets of the Terns eggs, I started to search for the nests of some Red breasted Mergansers, as I had noticed three or four of these birds leave the island on my approach. One nest was found but some vandal had been there before me, and finding the eggs advanced in incubation so as to be unfit to eat this unknown rascal had dropped a large stone into the nest, smashing the eggs to a paste.

Many parties visit this group of is-

lands to collect eggs for eating, and when they find incubated eggs these are usually broken without delay so as to ensure a fresh supply later on. They never allow any eggs to hatch if they can prevent it, and it is only a matter of time when the Terns will be exterminated along our coast, unless stringent protective measures are adopted and enforced. If the fishermen were allowed to take eggs only in the month of June, so that the birds could rear their young undisturbed after this month, then doubtless they would be able to hold their own.

I searched in vain for another Merganser's nest, and as in the meanwhile Captain Conary had taken advantage of a breeze to sail up to the island I was soon on board the boat which was headed towards headquarters at Sunshine.

The next day was occupied in preparing the specimens taken on the day before, but on June 26th we again made an early start to visit the haunts of the American Herring Gulls and Black Guillemots. Our first landing was made on Spirit Ledge, a small rocky island, and as we stepped ashore numerous Gulls rose into the air and lifted up their voices, making a loud cry to greet us. Their nests were loose affairs of dry grass, placed on the ground everywhere and containing two, three, and in a few cases four eggs which varied in color from bluish-white to a brownish shade, variously spotted and blotched with dark-colored markings of a brownish or blackish color. Some nests were well made affairs constructed of dry grass, seaweed and fairly well lined with feathers, but such were an exception.

While collecting a few of the handsomest sets, I flushed a female American Eider from a clump of weeds at my feet, and her nest of down containing six drab-colored eggs was revealed to my gaze. While I was securing this prize, Captain Conary found a set of

three slightly incubated eggs, and a nest with two fresh eggs of the same species.

In 1894, at this same island I had found a remodeled Gull's nest, containing one egg of the original owner and three Eider's eggs with the old Duck in possession. As the fishermen constantly rob these birds of their eggs, it is not uncommon to take sets of two or three eggs which are probably the second or even third set laid by the birds. I am informed that early in the season Eider's nests usually contain four to seven eggs.

Leaving this island, we proceeded to Black Ledge, about $1\frac{1}{2}$ miles distant, in order to inspect a colony of Black Guillemots which nested there. These birds deposit their eggs in crevices of or under the rocks, no attempt at nest building being made. By a careful search we found eight sets of two eggs each, and in nearly every case one of the parent birds was occupying the nest. These made no resistance to being caught and examined. On nearly all of them a spot bare of feathers was noticed on each side of the breast. I could not determine whether the birds had removed the feathers from these spots so as to allow the eggs to fit nicely into the cavities thus left, or whether the constant pressure of the eggs while the bird was incubating might have forced the feathers aside to leave those featherless spots.

The eggs are the handsomest which are laid by any of our Maine birds, being of a bluish-white or in some cases of a roseate buffy white ground color, and being spotted and blotched with various markings of brown, brownish-red, or black. The eggs are much sought for by collectors who desire a series for their cabinets, and any collection is beautified by a set of these handsome eggs.

We now departed for Heron Island where the Great Blue Herons were re-

ported to nest, but on landing a thorough search of various trees revealed no traces of the long-legged birds. However, we found numerous Gulls nests in the various trees; they had departed from their usual habit of nesting on the ground, and had placed their nests at a considerable elevation in the trees. I suspect they had been driven to do this by continued robberies of such nests as were placed on the ground. They were careful to select trees whose trunks were bristling with numerous small, dead limbs which were too small to support a person, and so would necessarily have to be all broken off by a person climbing the tree. It would take a very ardent oölogist to secure any of these nests.

As it was now noon, we enjoyed our lunch in the shade of the trees, and when through we set sail for Saddleback Ledge. On landing there I began to search for a Red-breasted Merganser's nest, as the year previous I had taken a set of ten eggs of the above on this island. I soon found the nest, but it was empty, and further on I found two empty nests of the American Eider.

While walking about the island looking for a few nice sets of Common Tern, I saw in front of me what I took to be a rolled up bunch of feathers. I wondered how the bunch came to be where it was, and on carelessly kicking it with my foot I caught a glimpse of something round within. Examining it closer I found it to contain four Eiders eggs. I was much surprised to find a nest of this species in such an open place, it being in plain view, but when it was first seen I never thought of such a thing as its being a nest.

We had noticed some Eiders leave the island on our approach, so without doubt the owner of this nest had covered the eggs well with the nest down, both to keep the eggs warm and to prevent our discovering them. If it had not accidentally been in my path, I

would have passed without discovering it.

As we were departing in our boat we met a fisherman engaged in hauling his lobster pots. He was surprised to learn I had found some Eider's eggs as he said he had thoroughly searched the island the day before, taking two sets of Eider eggs and a fine set of 10 Red-breasted Mergansers. I offered him some money for the latter eggs, if he still had them, but he said, "Lor, they was all eaten up long ago."

We now started on our return to Sunshine, having made plans to visit Seal Island the first good day in order to obtain some eggs of Leach's Petrel. Seal Island is situated some twenty miles out to sea, and is the last land passed by a vessel heading seaward. As the island is so far out to sea a landing on it can only be made after a northwest wind has blown a day or so, and calmed the rough seas which come rolling in from the Atlantic Ocean.

The next few days it was very foggy so I passed the time in preparing such specimens as I had already taken.

July 1 favored us with a good northwest wind so towards evening we went on board the boat and got under way, having decided to go as far as Isle an Haut that day and anchor in a good harbor there. This harbor was the nearest place from which to start for Seal Island, and by making a start at daylight the next morning I would have plenty of time to spend on the island.

It was not yet dark so we went ashore on Isle an Haut, and inspected the numerous cottages which belong to wealthy New Yorkers who spend their summers here. This island is very picturesque with its rocks and crags, and many artists pass the summer in painting the scenery. The natives of the island have applied the name "rusticators" to every one who comes there to pass the summer.

Returning to the boat we had our supper and were soon lost in slumber. The next morning we awoke at day-break, and although there was scarcely any wind blowing we got under way. After sailing five hours we reached our destination. Seal Island is perhaps half a mile long by a fifth mile wide. Its surface is covered with rich loamy soil, the disintegrated guano from generations of seabirds, and in this soil the Petrels excavate their burrows to a length of from 1½ to 2 feet. At the end of the burrow it enlarges into a small chamber which is occupied by a nest of dried grass, in which is deposited the single egg laid by this species.

Landing, we were soon at work digging for eggs. Petrel burrows were to be found anywhere over the surface of the island where there was sufficient soil. Often four or five nests were found within an area of two feet, and in every nest which contained an egg one of the parent birds was engaged in incubating it. Many burrows contained two birds and in such we did not find any eggs.

We would run our arms into the burrows, and by prying upward easily break through the soft soil so as to be able to reach the egg at the end of the burrow. I usually removed the egg and left the bird sitting on the empty nest. At first I had removed the birds before taking their eggs but I soon found that on being handled they spit out a quantity of fishy oil with very accurate aim. On being released they seemed half dazed, and went stumbling blindly about so I concluded that it would be better for all concerned to leave them in their nests.

The eggs of Leach's Petrel are of a pure white color when not stained by damp nest material, and while many eggs are absolutely unmarked a majority are speckled with a few marks about the larger end. A few eggs have wreaths of lavender spots about the

largest end, and one now in my collection has a wreath composed of scrawly lines such as adorn eggs of the Orchard Oriole. The eggs vary greatly in size: three selected specimens measuring as follows: 1.00x.77, 1.33x1.00, 1.41x.93 inches, but the average size is usually 1.25x.92 inches.

Having taken a sufficient number of sets we returned to the boat and got under way; having decided to visit a colony of Double-crested Cormorants on our way back. In a couple of hours we approached Black Horse Ledge, the home of the Cormorants, but before we could get in gunshot about 50 of the above mentioned birds flew from the ledge.

Black Horse Ledge is a steep rock rising directly from the ocean to the height of about 100 feet. Although the water was rough we managed to land and haul our boat up onto a shelf out of the way of the breakers. Herring Gulls were nesting in great numbers, but I left these till later on and began to search for Cormorants nests. On a shelf near the top of the ledge I found two rude nests of sticks and seaweed containing 3 eggs each. One other nest contained a single egg while other nests were in the process of construction. The birds must have been robbed by some other collector and were now laying second sets.

Mr. Chas. K. Reed informs me that in June '92 and '93 he took sets of Double-crested Cormorant eggs near Isle au Haut, and beyond a doubt he visited this same colony of birds.

After taking a few sets of Gull's eggs we hastened to leave the ledge, and came pretty near being swamped by a huge breaker rolling in on our boat and partly filling it with water. Nevertheless we reached our large boat in safety and set sail for Sunshine, arriving there in safety.

July 3 I returned to Bangor well pleased with my two weeks outing.

While on Deer Isle I had noticed various species of land birds, but was unable to spend time to find their nests. The Island is well wooded in various parts, and many rare Warblers doubtless nest there. Among the rarer land birds known to nest on the island are the Northern Raven, Bald Eagle, Yellow-bellied Flycatcher, Myrtle Warbler, and other species. I noticed numerous Juncos, Song Sparrows and White-throated Sparrows, and I am very sure I saw a pair of Tree Sparrows, but did not have my shot gun at the time, so was unable to shoot them and settle their identity beyond question. I also am fairly sure I saw a Hudsonian Chickadee as I remember noticing that it did not have the black cap of our common Chickadee. If this is the case they must nest there, but at the time I thought the bird was only a young bird of the common species, and not until lately when I learned that the old and young of the Chickadee have a very similar plumage did I realize that the bird I saw must have been an adult Hudsonian Chickadee.

At the time I remember thinking the bird looked somewhat odd, but having never met with the Hudsonian species at that time, I did not realize how near I had come to making a valuable discovery. Since October '95 I have taken a specimen of the Hudsonian Chickadee here in Bangor, and would now surely recognize the species when seen again.

I hope to visit Deer Isle again in the near future, and devote more time to a study of the land birds as I anticipate some rare and valuable discoveries in that direction.

Any one, who intends to do any collecting among the islands of Penobscot Bay, should procure the service of Captain Conary as their pilot. He is one of the most skillful of boatmen and the most genial of companions.

ORA W. KNIGHT.

THE OÖLOGIST.

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

FRANK H. LATTIN, Editor and Publisher.
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER

Clyde L. Smith of Oblong, Ill., writes that on the 13th of September he collected a set of two eggs of the Mourning Dove, incubation advanced about one-third.

Albert H. Verrill, son of Prof. Addison E. Verrill, curator of the zoological collection of Yale University, has confessed to the theft of articles valued at \$10,000 from the Peabody Museum at Yale. The thefts have extended over a period of two years, and the exact amount of the loss will probably never be known, as the young man has forgotten the number of pieces he has taken. Verrill is about 25 years old and a graduate of the class of '93.

Verrill has been an extensive patron

of the advertising columns of both the Oölogist and NATURAL SCIENCE NEWS during the past year and although we knew that he was selling specimens at ridiculously low prices, we considered that he had ample opportunity for obtaining the same legitimately—owing to his position and more so to the station of his illustrious father. Verrill obtained an unsavory reputation as an oölogist in '93 and we were one of the first to detect him in his crooked work—later, however, he successfully hoodwinked ye editor with a plausible explanation in which he, Verrill, posed as the injured party and, although we refused him space for some months we finally, under protest and with certain very stringent conditions and stipulations, allowed him the use of the same. As yet we have no reason to think otherwise than that our readers have been treated fairly by him and received big value for the money they saw fit to invest, the question now most naturally arises as to what proportion of these goods were filched from the Peabody Museum and what proportion of the ones that were will ever be returned.

New Subscribers.

New subscribers to THE OÖLOGIST are always in demand and during the months of March and April its publisher will give 50 cents worth of premiums for each new subscriber a present subscriber may send him This 50 cents worth of premiums must be selected from the list of premiums given on other pages of this issue, and ten cents must be added to cover the mailing expenses of the present. Remember the new subscriber can accept the \$1 premium offer made on another page, and will secure all the perquisites connected with the same and this 50 cents worth of presents is an additional offer on our part made to present subscribers who will assist in enlarging the subscription list of our little monthly.

Notes on Some Birds of Gage Co., Neb.

THE PRAIRIE HORNED LARK

Is an abundant resident, breeding here in the spring and summer, and collected in flocks of from 6 to 40 or 50 in the winter when it is often found in wheat fields. On April 23, 1893, I took four fresh eggs from a nest composed of dried grass by a stone in a pasture. I took no eggs in '94, but on April 3d found two nests each containing three birds about a week old. Both nests were of grass and the inside measurements were 1.5 in. deep by 2.5 in. wide. On May 31st I found another nest with birds about one and one-half weeks old; composed of grass, situated in a pasture as were the preceding.

They were paired on Feb. 24, 1895. * I watched one pair who had been feeding quietly, then suddenly would fly up and flutter about each other in the air for about a minute and then alight and go on feeding. I also observed a pair doing this on Feb. 10th. On March 17th I found a nest containing one egg, which was deserted a few days afterward. Jan. 6, 1896, I examined a stomach which contained small seeds and sand.

THE FLICKER

Is a common resident, a few remaining with us all winter. *Colaptes cafer* is commoner in the fall and winter than *C. auratus*.

Set 1. On May 21, 1893, I took 6 fresh eggs from a willow stub 15 feet from the ground.

Set 2. May 4, 1894, I took a set of 10 from willow stub 10 feet from the ground. The eggs lay in and upon two inches of chips at the bottom of the cavity 17 inches from the opening; incubation varied from fresh to eggs that would have hatched in four or five days.

May 7, 1895, a friend took a set of 7 from a 22-inch cavity, 12 feet up in a box-elder; bird had to be removed from the eggs with the hand.

Sept. 8, 1895, examined a stomach that contained wild grapes.

THE LARK BUNTING

Is common during the breeding season in the pastures.

Set 1. June 2, 1894, took a set of five, incubation fresh to begun. Nest in a tuft of weeds in a pasture; composed of weed stems and lined with fine grass; bird set close and then fluttered along the ground as if wounded. There was also a Cowbird's egg in the nest.

Set 2. June 6, 1894 took a set of five, incubation begun. Nest in a pasture by a weed, composed of grass and weed stems loosely put together. Both of the above nests had a platform of weed stems at the side of the nest on the surface of the ground.

In 1895 I first observed them on May 11th, when they were abundant in the pastures, the males singing their beautiful soaring song. They were last seen July 13th.

THE BURROWING OWL.

I did not meet this species until 1895. I found two colonies both of about 20 birds (judging from the number of holes in use). The burrows were in pastures, which had a sandy soil under the turf. They were usually about 6 feet long while some were as long as 10.

Around the mouth and covering the bottom I always found cow and horse dung in the ones occupied. May 11th I dug out two burrows both 6 feet long. One contained two fresh eggs, five field mice and a small garter snake beside the usual manure. The other burrow was strawn with horse and cow dung ready for eggs. There were also about a dozen mice and a small garter snake in the burrow. Partly dug out another hole which contained the remains of two small Sandpipers and a Chickadee.

* I am pretty sure that they remain paired throughout the year, but I have not enough data to be positive.

May 26th took five fresh eggs from a burrow three feet from a well traveled country road. The male flew away as we approached; the female was on the eggs. When I removed her she snapped her bill and bled at the mouth as I have seen them do before. The eggs were about $3\frac{1}{2}$ feet from the mouth of the burrow, which also contained two toads and a mouse. F. A. Colby also collected a set of seven, incubation begun, on May 19th, and a set of eight, incubation begun, on June 1st.

A. S. PEARSE.

Minor Observation.

There appeared in the OÖLOGIST a few months ago an article "Woodpeckers and their Nests," by Mr. Angus Gaines. He speaks of a nest of Downy and other Woodpeckers, so excavated that the contents could not be seen without removing a portion of the wall—"something not to be thought of"—in which he has my sympathy.

This is an every day occurrence, not only with Woodpeckers, but many other cavity building birds and may be easily obviated by a narrow strip of mirror, held so as to extend into the opening at such an angle as to reflect the bottom of the cavity.

Thus the habits of such birds can be thoroughly studied without disturbing particles of nesting. If so disturbed many birds will desert their abodes, others may continue on in an irregular manner not characteristic of their species, which would render notes valueless.

The use of the looking glass occurred to me a couple of years ago as I stood gazing at a shattered mirror which I had attempted to hang. Since that time I have used the pieces incessantly and found them invaluable.

The mirror can be used in many other ways which will suggest themselves.

I will mention one more, however: Glasses of different sizes and shapes can

be attached to a jointed fishing pole with a stiff hinge to move at different angles so as to reflect nests in more or less inaccessible places. To the pole may also be fitted attachable egg scoops. This method of mirror observation prevents tree scars which tell tales to small boys.

Fritz V. Raymond,
Ludlow, Ky.

Notes from District of Columbia.

Although our list of breeding birds gives but one duck, (the Wood Duck) as nesting in this locality it is to me quite plain that this year at least other varieties have lingered here to raise their young.

Having only seen them at a distance I cannot give their name. Perhaps this is another result of the severe cold of last winter, the ducks being detained here until the breeding season by the unusually inclement spring.

I have observed what appeared to be Green-winged Teal and Dusky Ducks in the midsummer months and hope to verify my suspicions as to their breeding and positive identity. Has any one else observed any unusual ducks in their localities?

One Bluebird this season is the total with me.

The Bluebird seems a fair rival of the Passenger Pigeon in the "great disappearing act."

A. B. FARNHAM,
Benning, Dist. Columbia.

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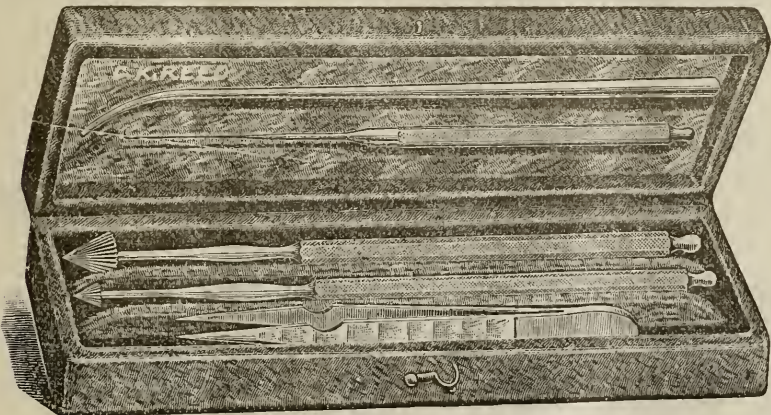
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Monthly.

VOL. XIII. NO. 3.

ALBION, N. Y., MARCH, 1896.

WHOLE NO. 135

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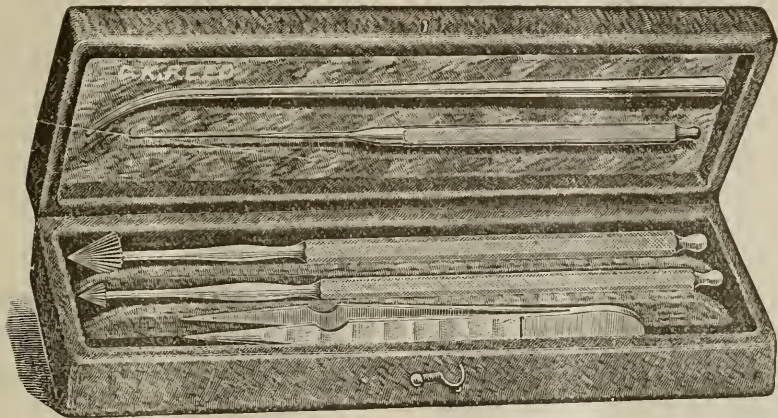
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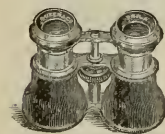
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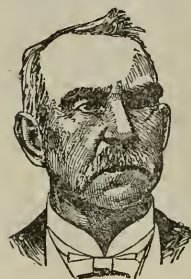
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I gradually grew
worse, very weak,
and completely dis-
couraged, until I
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couldn't lie down
nor sit up. Think-
ing my time had
come I told my fam-
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done when I was

gone. But on the first day of March on
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and wonderful to tell, in ten days I was
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work, and I hav'nt lost a day since. I am 56
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I believe I am fully cured, and
I am now only anxious that everyone shall
know of your wonderful remedies."

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THE OÖLOGIST.

VOL. XIII. NO. 3

ALBION, N. Y., MARCH, 1896.

WHOLE No. 125.

The Finding of Owls' Nests.

Four species of Owls nest in north-eastern Iowa, the Great Horned Owl, the Long-eared Owl, the Screech or Little Red Owl and the Barred Owl, the first named being the only kind which may said to be common.

Years ago my brother and I, while getting up the season's fire-wood during the first part of April, cut down an old red oak stump about twenty feet high. The top had long been broken off, the heart was sound and dry and most of the bark was still left, but the sap-wood had decayed making a tree which was the delight of the flying squirrels and Woodpeckers, who had accordingly gnawed and drilled cavities between the hard bark and the sound core to their hearts' content.

As the old log came down among the plum brush, with a crash, the bark split and large pieces sloughed off. From among the debris of bark, rotten wood and leaves we fished out a very much mussed Little Red Owl and two eggs. She had stuck to her nest, through all the jarring and noise of chopping down, to the last. We let her go but the eggs were for a long time part of our boyish treasures.

This was the only nest of *Megascops asio* that I ever found, though I have no doubt if the bird could be induced to leave her hole by rapping on the tree that more would have been found as the species was quite common but is getting more rare each year.

In going to and from the town to my work I often cut across lots through a grove, passing on my way an old oak

full of cavities and holes, which in its time has been the home and playground of many a family of young squirrels. Peering out of a particular knot-hole on one side, I sometimes for several days in succession will see one of our little red friends. As I approach the tree she gradually slides down into the hole till only her horns and the upper parts of her eyes are visible, and, as I pass on by, she as gradually slips back up to her former position. If I stop for a moment she is gone, absorbed by the darkness in the hollow old trunk. Several times I have climbed up to inspect her apartments but never found any eggs. I have concluded that it is not her home but only a sort of hunting seat.

The Long-eared Owl like her little red cousin was once quite common, and like her is becoming more scarce from year to year. I have found nests of this species in old Crows nests, the deserted nests of Cooper's Hawk and squirrels' nests. The first nest I ever found was in an old squirrel's nest about fifteen feet up in a scrubby oak. The last one was thirty-five feet from the ground in a nest that had been built and occupied the year before by a Cooper's Hawk. This nest was also in an oak. In fact I have never found a nest of this bird in any other tree except an oak. When I climbed to a nest the female never failed to try to drive me away by darting at me, often coming within a foot of my head but never quite striking it, and by snapping her bill loudly. The male bird never seemed to be far away, as shortly after the commencement of hostilities he would appear on the scene. He would not

venture upon an attack but would move about uneasily from tree to tree, protesting with a low "Who-o-o."

Up to the spring of '95 I had searched many a time for a nest of the Great Horned Owl but always without success. From what I had read I was led to believe that a hollow tree in not much frequented timber was the proper place for these birds to nest. Besides there were traditions among the people living in the "Timber" of the finding of them there. I have spent whole days and traveled over section after section of timber pounding with an ax on every likely looking tree but never yet have found one occupied.

But on the 3d of March, '95, I found my first nest and the spell was broken, for four more were found the same spring and two, so far, this. On that date I was passing through a small grove of rather tall oaks not eighty rods from a farm house. Chancing to glance at an old Hawk's nest I noticed a pair of "horns" protruding from the top of the nest and distinctly outlined against the sky. A few raps on the tree and Madam Owl was gone away over the tree tops.

It takes considerable "sand" and muscle to shin it sixty feet up a tree on a raw March day. But I did it and was rewarded with a set of two nearly fresh eggs. On the 31st of March I took another set of two from a nest about a quarter of a mile from the first and in another grove. This last like the other was in an old Hawk's nest but only about forty feet up and a much easier tree to climb. Both these sets I believe were laid by the same bird.

On the 7th of March during a heavy snow storm I frightened an Owl from the deserted nest of a Cooper's Hawk, not sixty rods from and in plain sight of my home. I am yet undecided who was the more surprised, the Owl or myself. There was one egg in the nest, which I left, thinking she would return

and I get a full set. But she must have remained away until there was too much snow in the nest for comfort, and then concluded to begin again, for the next day the nest was covered with a mound of snow out of which I took a frozen egg.

On the 12th of April while looking for Hawks' nests we found an Owl's in the top of a tall basswood in a ravine. From the hill where we were we could look down into the nest which was occupied by the mother bird and two good sized young ones. The old one lay lazily on her side taking a sun bath while the young ones crawled over and around her, the whole reminding us of a cat and a couple of young kittens. We watched them for some time through a glass until finally the old one becoming alarmed at our protracted stay, flew away and the Owlets settled down in the nest and became quiet.

This spring I spoiled the chance of again seeing how Mrs. Owl rears her family, by going to the place on the 8th of February and taking the two eggs which she had already deposited in a Hawk's nest about forty rods from the nesting site of a year ago.

My first set this spring was taken on the 1st of February from an old squirrel's nest in the fork of an elm in an acre or two of timber on the bottom lands of Yellow river. Of the seven nests which I have found not one was in the "Timber" but all were in isolated groves and all were within eighty rods of a farm house. All were in old Hawks' nests except the first one found this spring.

The Great Horned Owl is not much of a nest builder. The addition of a few dry twigs and pieces of bark and a few leaves pilfered from a squirrel's nest, together with a few feathers from the bird herself is all that is done.

Usually the eggs are more or less stained with blood from the birds' claws and have bits of feathers and

rabbits' fur sticking to them. I have never found any remains of food or bones in the nest.

Upon the approach of a person the bird will crouch so low in the nest that it is impossible to see her from the ground. There will, however, always be a pair of "horns" sticking up from the nest, when the bird is at home, to tell the story.

The nest of the Barred Owl I have never found, but have no doubt of their nesting here as specimens have been shot during the nesting season.

ELLISON ORR,
Postville, Ia.

My 1895 Outing in Assiniboia.

May 31, '95:—I was out of bed this morning about 4 o'clock and soon had breakfast ready. The weather had been windy and the tent had flapped all night and this, added to the noise of the numerous Plovers and other game birds and the excitement of taking a set of Buffleheads, had kept me awake most of the night. A coyote would occasionally favor us with his musical note. In the morning I went down to the edge of the lake and found that several deer had been drinking close to our tent. Their hoof marks were plainly discernable in the soft mud.

The sensation of listening to the different game birds making their noises at every hour of the night is something an ardent naturalist will never forget. The Killdeer, Avocets and Marbled Godwits appeared to make more noise during the night than the other kinds of Plovers. Perhaps the reason for this is because they were most numerous. Moreover, as we all know, the Killdeer is always a noisy bird during the breeding season. I missed the musical notes of the Western Meadowlark (*Sturnella magna neglecta*). I shall never forget the pleasure I derived from listening to the notes of this beautiful

bird in Manitoba during my visit there the previous season. I arrived at Long Lake, Man., one evening in June, '94, about 9 o'clock. The weather was fine and this bird was in full song. Many were singing from the tops of the telegraph wires. I had not heard the notes of this bird previously and at first did not know what kind of birds were favoring me with such sweet music. However I soon discovered I was listening to *Sturnella* and am of the opinion that I have never listened to sweeter bird music anywhere, although I have heard all our Eastern Thrushes sing and have listened to many of our Southern birds in their native haunts.

The notes of *S. neglecta* are richer and more plaintive than *S. magna* and the eggs are smaller, at least the set I collected are.

After breakfast my brother and his friend started out with me to try and locate a few more nests. We saw a female Martin leave a hole in a tree about 15 feet from the ground and I was soon inspecting the cavity which contained no eggs.

Several White-bellied Swallows (*Tachycineta bicolor*) were flying from holes in stubs but I did not molest their nests as my series of their eggs was full. I soon came to the tree from which I had taken the 9 eggs of *Charitonetta albeola* the evening previous. Both birds male and female were in the vicinity and I again climbed to the nest thinking I might get another egg. Judge of my surprise on finding the cavity half full of wet sea weed undoubtedly taken there by the birds. I have no doubt the pair laid another set of eggs and probably hatched their brood in peace. The locality is very wild and the chances are, nothing interfered with their second clutch.

I next flushed a Yellow Hammer (*Colaptes auratus*) out of a hole in a hollow tree. I did not climb to the hole as it was quite a way up, and the

tree liable, I thought, to break off before I reached the nest.

I saw a pair of Great Northern Shrikes (*Lanius borealis*) in a clump of trees. I identified the birds carefully as I wished to ascertain whether this bird bred in this locality. They appeared to be suspicious of my movements and kept very close to me. I soon found a very large nest and one of the Shrikes was very uneasy, and flew to the tree close to the nest. Nest was about six feet from the ground and was built in a willow bush, one of a clump of same. I soon inspected the inside of the nest and found it contained 7 fine eggs. They were fresh and measured as follows: 1.06x.75, 1.05x.75, 1.03x.75, 1.02x.75, 1.02x.75, 1.01x.76 and 1.00x.75. Color, dull white, spotted with purple and olive brown. The nest is a beautiful structure, measures 7 inches across the top and is 4 inches deep, composed of sage, sticks, weeds and lined with feathers from Hawks and other birds, and some kind of brownish hair or fur. The nest and eggs are now safely ensconced in my cabinet and very much treasured.

Before my departure to Assiniboia I took, in April, a set of White-rumped Shrike (*Lanius ludovicianus excubitorides*). The nest I found in a wild apple tree close to a spring-lake in Calhoun Co., Mich. Eggs six, incubated slightly, measured .93x.74, .92x.74, .93x.74, .96x.74, .93x.74 and .95x.76. Note in both sets of eggs the width of all the eggs is invariably the same, the length varying slightly. I have taken a good many sets of the White-rumped and Loggerhead Shrikes in Michigan and Indiana and also found the former bird breeding near C. P. R. station Qu Appelle, Assiniboia. I have many times read of the Northern breeding north and desired so much to take a set of their eggs. I searched carefully for the bird in Manitoba but found it not. Near Long Lake I found two nests of the White-rumped containing young.

The present find was my first and only set of Northern Shrikes and as the set is large and the nest fine I consider myself a lucky man indeed. Walking around the lake I had hard work forcing a passage through a heavy growth of willows. A Mallard flew from the centre of this clump and I soon found a hollow where she was preparing her nest for a clutch of eggs.

We now walked in the direction of the tent and arrived in camp at 9 o'clock and as the morning was cold and a storm appeared to be brewing we took down the tent and after loading everything in the wagon started in the direction of my brother's house taking a different route home from the one we traveled coming.

Shortly after we started it commenced to rain and as the wind was very strong and cold and I had on a thin shirt and a shooting jacket I almost perished before we finished our trip. I walked quite a little and examined a nest of the Long-eared Owl (*Asio wilsonianus*) built in a poplar tree, nest contained young birds. I also examined three nests of the Ferruginous Rough-leg (*Archibuteo ferrugineus*). Two nests contained five young birds and the other, three young. All were large structures and built in poplar trees.

As I was thoroughly soaked before we had traveled many miles and the rain turned to sleet my enthusiasm soon froze up and I was more anxious to reach warm quarters and shelter than to gather eggs. My companions also wished to hurry home even more than I so we probably missed some good sets on account of the weather.

We got to the house about 4:30 in the afternoon and I immediately changed my clothes and after a good warming and supper I started for the marsh and river close to the house. I walked about a mile through the marsh and flushed a Canvas-back (*Aythya vallisneria*) off her floating nest and eleven

eggs. Six of the eggs looked like Red-head's eggs, the other five were undoubtedly eggs of the Canvas-back. I was passing through a dry portion of the marsh overgrown with long grass when a Yellow Rail (*Porzana noveboracensis*) ran along the ground close to my feet. I was all excitement in a moment and the bird soon disappeared from sight. I did not make another step as I was sure the nest was within a few feet. I got down on my knees and after feeling through the grass a little I discovered the nest not two feet from where I stopped. The same was arched over and had I not flushed the parent at my feet I would never have discovered it. It was built of dry grass and contained four eggs. The same were probably an incomplete set, but I quickly gathered them in, and upon blowing them found all nice fresh eggs. They measure 1.08x.80, 1.10x.79, 1.10x.82 and 1.11x.81. All are of a rich buff brown and are marked with spots and specks of reddish brown and purple. I would have like to have left the set until complete, but I was afraid some animal, snake or bird might destroy the clutch, or I might not be able to again find the nest as the marsh was a large one, and the nest was well near the center of it.

I have taken some 40 sets of *Porzana carolina*, *Rallus virginianus* and *Rallus elegans* in Michigan and Indiana and have seen several incomplete sets left by me in the marsh come to grief and so I satisfied myself with the four eggs. I have met with the Yellow Rail in Kalamazoo Co., Mich., and have spent many hours searching for its eggs without success, however. The bird undoubtedly breeds in Michigan and Indiana but has such skulking habits it is almost impossible to locate its nest.

I now started for home via dry land and on the way took a set of two of the American Rough-legged Hawk (*Archibuteo lagopus sancti-johannis*). Nest was placed in a poplar tree, was made of

sticks, weeds, moss and feathers and was very large. Eggs were fresh. Female left the eggs just as I reached the tree. Her feathered shanks and general appearance were sufficient identity. As I get yearly nests from these birds I dislike to kill them unless I need a skin for my cabinet.

When I reached the house a little girl brought me a small nest made of fine hay and hair. It was found on a bush and contained three small eggs almost round measuring .51x.40, .50x.40 and .48x.43. Eggs are smaller than the Bush-tit and are bluish-green striped near the top with reddish brown. I was very sorry indeed that the girl did not leave the nest and let me get the bird. I told the children not to take any eggs but to mark the nest and show it to me so I could get the parent if necessary to identify the eggs. Unfortunately the child did not do as she was told. She told me the bird was a little gray one. I went to the spot in hopes of getting the parents but in this I was unsuccessful. The eggs were fresh and I have blown them and together with the nest they form part of my collection; not identified more's the pity.

E. ARNOLD.

Battle Creek, Mich.

[TO BE CONTINUED.]

Audubon's Caracara.

Polyborus chertiway.

As I have never seen anything written regarding the Audubon's Caracara, I will tell my experiences with this interesting bird, hoping that they may be of value to your readers.

The bird is very partial to the mesquite region. The following fact will prove it: This county is hilly and broken and well covered with oak timber, and has an elevation of 1,600 feet. Bexar county, which joins Kendall on

the south, is the opposite, except the north-west corner. It is covered with mesquite, which grows about 15 feet tall, sparsely dotted with live-oaks. The elevation is 600 feet. The next county, Wilson, is like Bexar, except that the greater part of it is heavily timbered with oak, hickory and elm. I have observed but one bird in Kendall county, and my friend and companion, Arthur H. W. Norton, saw but one pair during a several months' visit in Wilson county; but in Bexar it is very common. Norton states that the pair nested in the neighborhood, but he failed to locate the nest.

The nests are placed in the scattered live-oaks at an average height of thirty feet from the ground. The birds are very partial to "broom-weed" in the construction of nests, and do not use sticks very much.

How well I remember the time in '92, when Norton, who lived five miles south-east of San Antonio, came to school and related that he had taken a set of two eggs of the Mexican Eagle. At that time, I was also a student at the same school. The incubation was far advanced, as the date was March 27th; but Norton worked at them very patiently, and succeeded in extracting the embryos.

What a thrill went through me when I first gazed upon those precious eggs. Then on the 22d and 23d of April, we took two sets of two eggs each, incubation fresh. One of the sets was laid by the same pair of birds, and in the same nest from which Norton took the first set. By the way, I will mention that we called the tree in which that nest was situated the "bee-tree," since a swarm of wild bees had once occupied a cavity in one of its limbs. I cannot account for the other set. It looks as though the birds were way behind in their domestic duties, or else their first eggs were made way with. I am under the first impression. My notes tell me

that the next set was taken June 10th, incubation far advanced. We were "bumming" around in the brush not far from the "bee-tree," enjoying ourselves and seeing what there was to be seen, when in approaching an old dilapidated hawk's nest that was placed about twenty feet from the ground in a hack-berry, a Caracara spread forth her pinions and departed. We ran up all excited, and gazed up at the nest. Imagine our surprise when we saw that there was a large hole in the middle of it with a few sticks laid across it, and two eggs plainly visible.

This was the third set that this pair had laid that season.

On the 1st of May, Norton found two young birds about four miles south of his place. They were about a week old. Being fond of pets, and thinking he could raise them, he took them home and installed them in a chicken coop. Contrary to my expectations, they thrived in their captivity and away from a fond mother's tender care. They were fed on rabbits, cactus rats, beef steak and in fact anything in the way of meat.

In about ten days, they were standing on their feet as well as any bird. They were quite passive in disposition, but were never fond of being handled; they would keel over on their backs and grab at your hands with their claws. But take it all in all, they were mild, little innocent brutes. The most wonderful thing about them was their eating propensities.

The capacities that those little wretches exhibited were truly marvelous. Sad to state, one of them got hold of a young muscovy duck that had died, and true to his nature, tried to swallow it, despite the fact that the duck was about the same size as the eaglet.

The head and neck went down all O. K., but the body would not fit, and so the little glutton kicked his last. An inquest was promptly held on the case.

Verdict: Suffocation, brought on by grief and disappointment. His surviving companion also met with an untimely and tragic death. Norton had two Red-tails (*Buteo borealis*) in a shed adjacent to the Caracara's coop, and one day Master *Polyborus* got too near a crack.

As quick as a flash, a murderous *Buteo* grabbed poor *Poly.*, and tore him to pieces.

For '93, I turn to my note book.

March 1st. Went out to Norton's after school, and on the way, we went by a Caracara's nest and found it rebuilt with sticks and lined with cedar bark, ready to be laid in. We then went over by the "bee-tree" nest and found it containing one egg. Early the next morning, we took our baskets and started out on a long tramp for eggs. We went south about two and a half miles, finding some good hawks' nests around a hill that we gave the suggestive name of "Razor-back." One of the nests was ready to receive eggs. Then we went east, and after going a little way, saw a nest in an oak with a Caracara sitting on a limb nearby. We ran to the tree, and Norton climbed to the nest, but there was a plentiful lack of anything like eggs.

On our approach, the bird flew over onto another tree nearby and allowed us to come up quite near him. This awakened our suspicions, as at other times it is quite shy and will not let anyone come up very near. We also knew that the male always sits on a particular tree not very far from the nest where the female is sitting. So we began to circle around to find the nest. Soon I saw an immense structure in a large live oak, and upon climbing up to it found three eggs. They were still warm, but neither of us had seen the female. The male did not fly towards the nest, but off to one side, and I suppose alarmed his mate in some way.

The female in leaving a nest never

soars or flies away at any height from the ground; always below the tree tops, but she soon alights.

The nest was composed of weeds and small sticks, about thirty feet from the ground and measured two feet across by one foot deep. Then we proceeded eastward a mile and a half to a creek called the Salado, and after following up the stream for about a mile, struck out across the country home. After dinner we went over to the "bee-tree" and added another set of two eggs to our collection. The eggs of these two sets were typical; a ground color of cinnamon and other shades of brown, spotted, blotched and clouded with yellowish-brown, chestnut and other shades.

March 18th. After breakfast we started out and went over the same route. The hawk's nest on Razor-back, that was all fixed up, was fixed all over again by a Caracara with weeds, and the birds were flying around very suspiciously. Then we examined the nest from which we took the set of three on the 2d, but it was empty. Over near the Salado we took a set of two eggs of the Red-tailed Hawk. The nest was composed of sticks, lined with bunch-moss and situated in a live oak 25 feet from the ground.

The ground color was blueish-white, spotted and blotched with reddish-brown and cinnamon.

In returning home we ran across a Road-runner's nest, containing four eggs in the midst of a bush. The nest was made of sticks, lined with dead grass, three feet from the ground. Road-runners are scarce in that part of the country, owing to the miserable "Sunday hunters," who go out just to see what they can shoot, so we were lucky in running across this nest.

March 25th. About nine o'clock we started out on our old route. On "Razor-back" we took a set of three eggs of the Caracara from the hawk's

nest which the birds fixed over last week.

The eggs were typical. This set was secondary; the first being the first set of the season. In going up the Salado bottom, we had the inestimable pleasure of seeing a Florida Barred Owl leave a hollow stump, which was about fifteen feet tall. The hollow was only a foot deep and contained one fresh egg. In returning home we went by the "bee-tree" nest and found two beautiful eggs awaiting us.

This was also a secondary set. The ground color was nearly white, spotted, blotched and clouded with many rich shades of brown.

About the middle of April, the same pair went and fixed over an old nest not far away, and laid two more eggs. One of these was simply exquisite. The ground color was almost pure white, spotted and blotched with bright red.

The other egg was typical. The size was very small, not more than 2.00 x 1.50.

As to the first nest which I mentioned of visiting on the 1st of March, the birds hung around for nearly a month and then left.

They are persistent layers and will deposit as many as four sets in a season.

In '94, Norton took first set on March 2d, but last year, it was the middle of April before he found an egg.

35 per cent. of the sets we have collected consist of three eggs, the rest of two.

They are very silent birds. I have never heard them utter a sound. Their food consists chiefly of rabbits, squirrels and other small mammals, and sometimes they feed on carrion in company with the Black and Turkey Vultures, but they do not associate with them at other times.

I once came upon a dead cow whereon about thirty Vultures and eight Caracaras were feeding.

They all took flight at my approach; the Vultures circling overhead; but the Caracaras all lit on the ground not far away. Their flight resembles that of the Turkey Vulture, but is much stronger and they seldom circle as does a Red-tail. During my fifteen months' stay in and about Monterey, Mex., I saw but two of these birds and that was a year ago last month.

It seems strange to me that Caracaras should be so rare in that part of Mexico.

Monterey is situated in a valley about thirty miles broad, which is timbered with mesquite, and to my mind an ideal place for the birds. But it is evident that *Polyborus cheriway* and I do not think alike.

Last August I was down on the Foston River, about ninety miles northwest of Tampico, Mex., and I never saw so many Caracaras in all my life as I saw during that one week.

They were very abundant. The country there is quite flat and is covered with mesquite timber about twenty feet tall, and in some places is quite dense.

IRVING H. WENTWORTH,
Waring, Texas.

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*Common Tern.....	08	*Great Blue Heron.....	30	*Bob-white.....	10
Least Tern.....	08	Snowy Heron.....	15	Florida Bob-white.....	15

Mountain Partridge.....	75	American Crow.....	05	*Yellow-breasted Chat.....	08
California Partridge.....	10	*Bobolink.....	25	Long-tailed.....	15
Valley Partridge.....	15	Cowbird.....	02	Pileolated Warbler.....	50
Sooty Grouse.....	75	*Yellow-headed Blackbird.....	05	*Am. Redstart.....	15
Oregon Ruffed Grouse.....	40	*Red-winged Blackbird.....	01	*Mockingbird.....	05
Prairie Hen.....	20	Bicolored Blackbird.....	10	*Catbird.....	02
Wild Turkey.....	1 00	Tricolored Blackbird.....	15	*Brown Thrasher.....	02
Chacalaca.....	50	Meadowlark.....	12	Sennett's.....	15
*Red-billed Pigeon.....	1 00	Western Meadowlark.....	12	*Curve-billed Thrasher.....	15
*White-winged Dove.....	20	Orchard Oriole.....	06	Calif. Thrasher.....	20
Ground Dove.....	50	Baltimore Oriole.....	06	Cactus Wren.....	20
Turkey Vulture.....	75	Brewer's Blackbird.....	03	Bewick's Wren.....	20
Black Vulture.....	75	Purple Grackle.....	05	Baird's Wren.....	20
Marsh Hawk.....	35	*Bronzed Grackle.....	01	House Wren.....	05
Sharp-shinned Hawk.....	1 00	Boat-tailed Grackle.....	15	Parkman's Wren.....	10
Cooper's Hawk.....	30	Great-tailed Grackle.....	15	*Long-billed Marsh Wren.....	05
Harris's Hawk.....	60	Purple Finch.....	20	*White-breasted Nuthatch.....	35
*Red-tailed Hawk.....	60	House Finch.....	05	Brown-headed.....	25
Western Red-tail.....	60	*Am. Goldfinch.....	05	Tufted Titmouse.....	30
Red-shouldered Hawk.....	35	Ark.....	10	Plain.....	50
*Fla. Red-shoulder Hawk.....	60	*Ch'tn't-collar'd Longspur.....	35	*Chickadee.....	12
American Sparrow Hawk.....	30	Savanna Sparrow.....	12	Oregon Chickadee.....	35
Audubon's Caracara.....	1 00	Seaside.....	20	Carolina Chickadee.....	15
American Osprey.....	50	*Lark.....	05	Wren-tit.....	50
American Barn Owl.....	35	West. Lark.....	05	Calif. Bush-tit.....	15
American Long-eared Owl.....	30	*Chipping.....	03	Blue gray Gnatcatcher.....	20
Florida Barred Owl.....	1 00	Black-throated Sparrow.....	20	*Wood Thrush.....	06
Florida Screech Owl.....	40	*Song Sparrow.....	02	*Wilson's Thrush.....	12
California Screech Owl.....	40	*Heermann's S'g Sparrow.....	10	*Russet-backed Thrush.....	15
Road-runner.....	25	*Swamp Sparrow.....	10	Hermit Thrush.....	30
*Yellow-billed Cuckoo.....	10	*Towhee.....	10	Am. Robin.....	0
*Black-billed Cuckoo.....	12	*Spurred Towhee.....	20	Bluebird.....	03
Belted Kingfisher.....	15	*Calif. Towhee.....	10	Mountain Bluebird.....	10
Hairy Woodpecker.....	40	Gray-tailed Cardinal.....	25	FOREIGN.	
Downy Woodpecker.....	20	Rose-breasted Grosbeak.....	10	*Song Thrush.....	05
Baird's Woodpecker.....	50	*Black-headed Grosbeak.....	15	*Blackbird.....	10
*Red-shafted Woodpecker.....	20	Blue Grosbeak.....	20	*Redstart.....	10
*Red-shafted Flicker.....	10	*Indigo Bunting.....	08	*Willow Warbler.....	05
Nighthawk.....	40	Lazuli Bunting.....	20	Wood.....	15
Chimney Swift.....	12	Painted Bunting.....	10	Marsh.....	20
Costa's Hummer.....	60	Dickcissel.....	05	Cettia.....	40
Anna's Hummer.....	50	*Lark Bunting.....	25	Orphean.....	50
*Scissor-tailed Flycatcher.....	10	*Scarlet Tanager.....	25	Grasshopp'r.....	35
Kingbird.....	04	Summer Tanager.....	20	Rufous.....	25
*Arkansas Kingbird.....	06	*Purple Martin.....	12	Jay.....	10
*Cassin's Kingbird.....	20	Cliff Swallow.....	03	Garden Warbler.....	10
Crested Flycatcher.....	12	*Barn.....	05	Hedge Sparrow.....	10
*Mexican Crested Flycatcher.....	25	*Tree.....	15	Siskin.....	75
Ash-throated Flycatcher.....	25	Bank.....	03	Wren.....	05
*Phoebe.....	04	*Rough-winged Swallow.....	20	Robin.....	05
Black Phoebe.....	15	Cedar Waxwing.....	10	Black-cap.....	10
*Wood Pewee.....	12	Phainopepla.....	30	Spotted Flycatcher.....	10
*Western Wood Pewee.....	20	*White-rumped Shrike.....	08	Long-tailed Tit.....	30
Western Flycatcher.....	25	*Red-eyed Vireo.....	10	Mongolian Pheasant.....	35
Acadian Flycatcher.....	20	*Warbling Vireo.....	20	Partridge.....	15
*Little Flycatcher.....	20	Yellow-throated Vireo.....	30	Barbary Partridge.....	25
*Traill's Flycatcher.....	25	White-eyed Vireo.....	15	Pheasant.....	25
*Least Flycatcher.....	15	Bell's Vireo.....	15	Sparrow Hawk.....	30
*Prairie Horned Lark.....	15	Prothonotary Warbler.....	25	Dartford Warbler.....	40
Ruddy Horned Lark.....	30	Lutescent.....	75	Blue-throated Warbler.....	40
American Magpie.....	20	Parula.....	20	Black-headed Gull.....	30
Yellow-billed Magpie.....	50	*Yellow.....	04	All guaranteed 1st class. Or	
Blue Jay.....	04	*Chestnut-sided.....	20	those marked (*) I have original	
*Florida Blue Jay.....	25	Prairie.....	30	sets with data. Write for	
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Faithfully, "LATTIN."



THE OÖLOGIST.

Monthly.

VOL. XIII. NO. 4.

ALBION, N. Y., APRIL, 1896.

WHOLE NO. 126

Wants, Exchanges, and For Sales.

Brief special announcements. "Wants," "Exchanges" "For Sales." Inserted in this department for 25c per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25c. Terms, cash with order.

"DEALERS" can use these columns at *Regular Advertising rates, only*.

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FOR SALE.—Coast birds in the flesh, Vols. XI and XII of the *Oölogist*, Vols. IX and X of *Ornithologist and Oologist*, Vol 1 of the *Museum*. ALVAH G. DORR, Bucksport, Maine. J2t.

WANTED.—Good double shot gun in exchange for Natural History specimens. Deer heads, birds, etc., ALVAH G. DORR, Bucksport, Me.

WANTED a good shot gun, revolver or rifle in first class condition. Have eggs in sets and singles to exchange. Persons who care to exchange write to GEO. S. GREENE, Care of First National Bank, Los Angeles, Cal.

NOTICE.—I will give a good pair of opera glasses for a set of 1/2 Bald Eagle or for a set of 1/2 Dusky Poor-will. Eggs must be in good condition. Address, R.P. SMITHWICK, Merry Hill, Bertie Co., N. C.

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FOR SALE.—Very cheap for cash rare sets including many of the raptures. Will exchange for old coins, kodak or camera, anything valuable. C. H. WATROUS, Chester, Conn.

FOR EXCHANGE.—Gent's size gold filled watch (new) case, warranted 20 years, works. N.Y. Standard Watch Co. Would like camera, good microscope, or best offers. Write me. FRANK STUART, Ritzville, Wash.

WANTED.—To correspond at once with parties who can collect eggs of the Passenger Pigeon. Also want *Nidologist* of Oct., Nov. and Dec. 1893, and Feb. Apr., May, Aug and Oct. 1894, and *Oölogist* of May 1891, Mar. 1892, and Apr. 1893. Will give 25c in singles for each clean copy. OTTO J. ZAHN, 427 S. Hope St., Los Angeles, Cal.

FOR EXCHANGE or sale. Birds eggs in sets, bird skins, mammal skins, mounted specimens, Indian relics, etc. C. F. FITE, Denver, Ind.

SNAKES. Lizzards and Butterflies. Will exchange for a six-inch caliper, graduated in hundreths of inches, a set of egg drills and \$2.50 in cash. A snap. AMOS PYFER, Lanham, Neb.

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TO EXCHANGE.—I have large lists of fossils, minerals, sets, Indian Relics and finely mounted birds. I will exchange for good sets or skias and good cloth bound books. Send lists and state which lists you desire to select exchange from. GEO. W. DIXON, Watertown, S. D. N.

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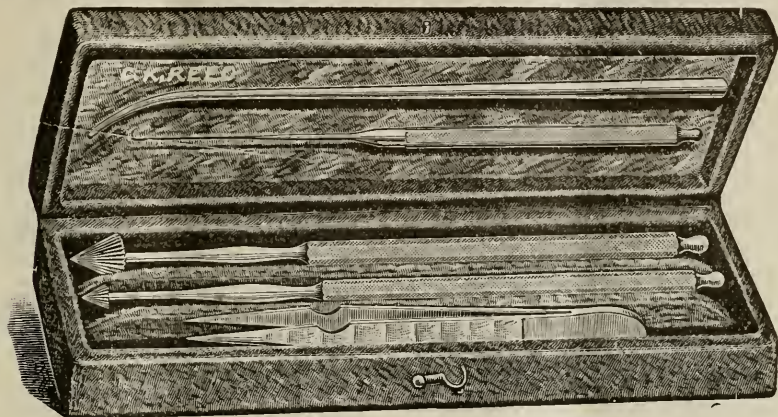
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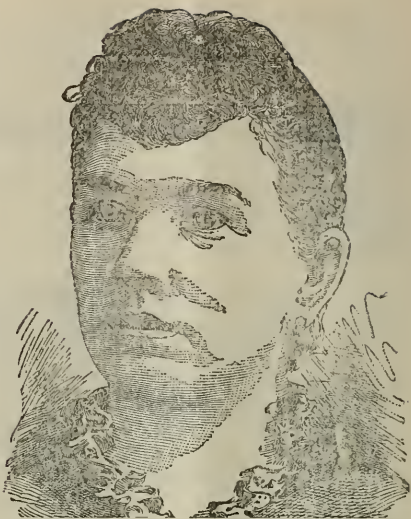
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THE OÖLOGIST.

VOL. XIII. NO. 4

ALBION, N. Y., APRIL, 1896.

WHOLE NO. 126.

A Handful of Winter Notes.

As usual, at the arrival of the OÖLOGIST, I sat down with the January number to digest the nutriment for which I hunger each month.

The title of the leading article, "Winter Work for the Ornithologist," called my attention. I accordingly began to satisfy my craving with this morsel.

From the title I expected to find a list of instructions for out-of-door work; but as regards to how much I was deceived, I need not speak. I interpreted this article as a general but nevertheless a *just* censure against the great army of selfish Ornithologists.

Now in so much as I consider myself to have been a private in this same army I feel justified in calling it by the foregoing name. But I have determined to come out from the ranks of an army designated by so despicable a name. And I hope many others have turned to the same road, with the same feeling of indebtedness to brother Sillo-way. Therefore, following his suggestion of "placing your notes, however worthless they may seem to yourself, at the disposal of some good paper," I send these simple notes, taken from a few pleasant rambles during the past two months, to the Editor of THE OÖLOGIST. For various reason perhaps it will be best to begin with the most common species.

THE REDPOLL: Without doubt this little visitor has been our most common bird. On account of its manner of flight and its song or twittering it is often mistaken for the Goldfinch. On Nov. 30 I noticed several small flocks of Redpoll; they seemed to be feeding upon the buds of the birch, also the seeds

of weeds, etc. On December 10th, observed a very large flock of these birds mingled with the American Goldfinch. During January these birds were seen more around the fields and in the gardens than in the birches. The Redpoll is much tamer when it is upon the ground amongst the weeds than it is in a tree, often allowing a person to approach very near and then hopping off.

THE CHICKADEE: Little need be said about this feathered scolder. In all my tramps I find him the most inquisitive of any of my feathered friends. If you do not approach him he will approach you. Have always noticed them in flocks, never solitary, feeding anywhere from the top of the trees, down the trunk, out on the ends of the limbs and also upon the ground.

THE RED-BELLIED NUTHATCH: Nearly as often as I have walked into any heavy growth of coniferous trees I have heard the familiar "quack" of these busy laborers. Always in flocks; sometimes in company with the Chickadee. Feeding anywhere upon a tree, and once I observed them drinking from a little stream of water upon the ground amongst large trees. Although having seen many of this species of the Nuthatch, I have not observed a single individual of the White-bellied species.

THE SNOW BUNTING: There has been very little snow up to Jan. 24th and for this reason these birds have not been seen very often. On Dec. 7, soon after a snow storm I took a stroll out through the fields and woods. As I was passing by a clump of bushes in a low meadow a flock of fifty or more of these birds flew out from the bushes. They appeared to be feeding upon birch buds and various seeds. The next day

the same was a flock around in the fields, eating the seeds of grass and weeds which protruded above the snow. Soon the snow disappeared and with it the Snow Buntings. There was quite a fall of snow on Jan. 24th and the next day the Snow Buntings were around in force. From that day until now (Feb. 1st) these birds have been plentiful both in the roads and in the fields.

THE AMERICAN GOLDFINCH: What I have stated about the Redpoll will be true of these birds except that I have noticed solitary individuals of this bird and it is by no means so common as the Redpoll.

THE AMERICAN CROW: Not for a good many years has the Crow been seen in this neighborhood throughout the winter. But on account of the open winter this year I have almost daily seen one or more of these birds. On Dec. 7th, I observed three of these birds in an open field during the forenoon and in the afternoon while in the woods I saw a large flock making a great disturbance over a Broad-winged Hawk.

THE RUFFED GROUSE: In certain localities I nearly always see this bird. These localities are all in the low lands, where there is considerable amount of underbrush and small coniferous trees.

THE DOWNY WOODPECKER: This bird frequents more generally the heavier growth this time of year, usually in a hard wood tree, at least, of all I have seen I only noticed one in a pine. All that I have observed were solitary.

THE PINE GROSEBEAK: Have seen very few of these birds in comparison with other years. On Dec. 10th, I found three of these birds, two males and one female, in a small growth of pine and fir trees. They were feeding on the buds of the pine, and very much resembled a Parrot in their motions while eating. After this I saw no more of these birds until Jan. 25th, soon after a snow storm. On that day I noticed a flock of fourteen in an orchard feeding upon frozen apples.

THE WHITE-RUMPED SHRIKE. Saw two of these birds on Dec. 7th. Have not seen any since. One of them drove a Redpoll into the brush with which the house was banked. There he sat upon a tree near by waiting for the Redpoll to come out, and I think he would have caught it if I had not driven him off. When in pursuit of the bird he dropped from the top of a tree nearly to the ground and then flew swiftly along just above the ground.

THE HUDSONIAN CHICKADEE: A few (3) of these birds feeding along in company with their black-headed brothers are all that I have seen.

THE BLUE JAY: These birds have been uncommonly scarce this winter. Wherever I have seen them it has always been a solitary one and very wild, sneaking away from the farther side of a tree. Where do these birds go? Until late in the fall they were very plenty.

THE GOLDEN-CROWNED KINGLET: A few of these very interesting birds are all that I have noticed. On two different occasions when I noticed them they were in company with Chickadees, which they resemble in habits, but may be distinguished by their gentle "seep" even when you cannot see them.

THE TREE SPARROW: In two months I have only observed one solitary individual of this bird. That was on Nov. 30th.

THE AMERICAN CROSSBILL: Although I have seen and heard many birds flying which I called Crossbills, yet I have seen but one flock of three at rest. These were eating the buds and cones on a tall fir tree Dec. 28th.

THE BROWN CREEPER: I found this bird generally in heavy growth. One which I watched for a long time seemed to prefer to work about the trunk of the trees than upon the limbs. Going up, down or sideways. In flying to a tree this one always lit at the base and worked up. This was on Jan. 2d.

THE GREAT NORTHERN SHRIKE: On Jan. 24th, I noticed one of these birds. He soon saw me though and disappeared.

F. E. POMEROY,
Lewiston, Me.

A Few "Don'ts" for Amateurs in Making Bird Skins.

Don't omit to measure the *length* before skinning your bird—it is the only measurement you can't get from the dried skin.

Don't forget to stop your bird's mouth and nostrils with clean cotton—you may save trouble in washing.

Don't cut too far up on the breast—midway between the end of the "wish-bone" and the beginning of the abdominal cavity is about right—your skin will be smooth and better shaped on the breast.

Don't cut too close when amputating the tail—if you cut the ends of the quills you will lose the feathers.

Don't pick *all* the feathers off the rump when skinning down the back—you will need a few to make your specimen presentable.

Don't strip the ends of the secondaries from the bone when cleaning the wing, the skin will spread enough to let you get most of the meat out and a pinch of arsenic in the cavity will settle the balance. You will find it much easier to make up your skin.

Don't stretch the neck.

Don't stop skinning till you have passed the *eyelids*—then if you break an eye the fluid will not soil the feathers.

Don't economize on arsenic.

Don't put the eye-cotton in from the outside—make a smooth ball of cotton and put it in the eye-socket before reversing the skin. If it becomes bloody put in a clean one.

Don't omit to put a wire or stick in your specimen's neck. Let the end stick into the brain cavity, and the balance lie along the back of the neck to a point between the wings.

Don't put the end of the neck-roll into the brain cavity—put it up the throat.

Don't put the body-roll over the neck-roll. Lift up the end of the neck-roll

and insert the end of the body-roll under it, letting it lie on top of the stick.

Don't omit to pinch the bird between the shoulders before you try to put the wings in place.

Don't get the secondaries bunched up.

Don't leave the mouth open.

Don't let the cotton body protrude—you can dress the feathers over the cut.

Don't have a label large enough to wrap your skin in.

Don't fail to label correctly—*Date*, *locality* and *sex* are the most important items.

Don't spoil a nicely stuffed skin in the wrapping—select one method of wrapping and make yourself perfect in it.

STRIX, Drytown, Calif.

My First Take of '96.

February 22d my friend B. and I started out prospecting for Great Horned Owls nests. Our objective point was a place about 3 miles from town, called "The Island." We had in view a large oak tree, in which three young owls were seen last February. On arriving in the vicinity of the tree a male Owl was seen to fly to a tree a short distance from us, to be joined soon after by the female. Not having seen where the female came from we made preparations to examine all the nests and hollow trees in the immediate neighborhood. B. being the light weight to him fell the lot of climbing the first tree, the one before mentioned. Strapping on his climbers he started on his 20 foot climb with my good wishes for his success. Arriving at the hole and peering in a short time he called out, "Plenty of feathers and a new nest but no eggs." While he was coming down I went up to another hole but met with the same fate. We examined several other nests and holes but were compelled to give it up and go home empty handed. Being satisfied from

the actions of the birds who kept flying from tree to tree in a restless manner and snapping their bills, that their nest was, or was to be not far away I determined to return and try to locate it.

February 28 I again started out accompanied by another friend. This time we approached from another direction and hitting the trunk of the tree several sharp raps I had the satisfaction of seeing the female fly from the hole. It would be a hard climb for me but my friend declined the invitation. I saw no other way out of it and started up. I had visions of two white eggs at the bottom of the hole but was highly gratified to find three and felt amply repaid for all my hard work. Quickly securing my prizes and lowering them to the ground I started down myself. When I had covered about half the distance I slipped and went the rest of the distance a good deal faster than I ascended but had the good luck to land on my feet with nothing worse than a few scratches. This being the only set of *Bubo virginianus* I have and having secured it myself I feel quite proud of it.

There are several more pairs of *Bubo* around here and I have hopes of getting another set before the end of the season.

W. F. HILL,
Lake City, Minn.

The Study of Birds.

The following circular letter sent out by the Migration Committee of the Michigan Ornithological Club to its members in that state contains the essential principles of true bird study to such an extent that we print it in full. Every state in the union should have a similar club:

DEAR SIR:—The Michigan Ornithological Club was organized primarily for hard work, and work that would count in the study of Michigan birds. Pursuant with this design, a committee has been appointed with instructions to

arrange and carry out a systematic and comprehensive plan for a thorough investigation of the birds of Michigan. This we hope to accomplish through the hearty coöperation of all who may be interested in the ornithology of our state, and who will soon, if not already, be members of our bird club. We hope to have every county in Michigan patrolled by competent observers, who will report to us on the migration, range of species, breeding habits, etc., of our birds. A careful resume of these reports must in the course of years, develop into a fund of knowledge, which will in reality be a complete survey of the wonderfully varied and interesting avis-fauna of Michigan.

We request your coöperation in this work. Will you not agree to send us copious notes, gleaned from whatever observation you may be able to make this year? Anything and everything of interest will be appreciated and valued, and due credit will be given all who contribute to this interesting fund of data.

We wish to determine definitely, when our birds arrive and depart, or pass through each section of the state. How fast they travel, whether by day or night, which come first, males or females, when the first nests are built, and when the last. How long the process of construction takes, etc., where situated, period of incubation, food of adults and young; in fact *everything regarding all* of the birds known to our state.

If you will help us in this work, kindly inform the chairman of this committee, when full instructions and blanks will be furnished with pleasure. Write any member of this committee at any time regarding the work. We will be happy in anything we can do to aid you.

Yours in the love of birds,
L. W. WATKINS, Chairman,
W. E. MULLIKEN,
T. L. HANKINSON,
Committee on bird migration and field work.

Two Interesting Birds of Tonawanda Swamp.

Tonawanda Swamp is a large swamp of some sixty or seventy thousand acres situated in Western New York, extending from near Buffalo in an easterly direction, through the counties of Erie, Genesee, Orleans and Monroe.

It is a favorite breeding place for many species of both land and water birds, its timberland and its dense second-growth furnishing favorite haunts for the birds who choose to build their nests and rear their young in the trees and bushes; and its extended marshes, some dry and some covered with water, and a thick growth of cat-tails, reeds, marsh grass and many varieties of sedges and water plants, form excellent breeding places for Bitterns. Marsh Hawks, Rails and all species of birds who choose to build their nests in the grass or water.

It is also an excellent place for many species of Ducks and Grebes, as it abounds in small streams, ponds and stagnant pools of water. It has many dangerous places to one not acquainted with the swampy parts as there are many mire-holes where a man would sink out of sight in the mire, if unfortunate enough to get into such places.

This swamp forms attractive breeding grounds for Ducks and Geese during migration, therefore we generally have good Duck shooting every spring and nearly every fall.

I have chosen for my subjects two common and well known birds—the Great Blue Heron, and the American Bittern—whose habits I have carefully studied for the last four or five years.

GREAT BLUE HERON.

The Great Blue Heron was formerly very common in this vicinity, but it is becoming more scarce every year, owing to the vast numbers that are wantonly killed. They breed in colonies only, and for that reason large numbers can easily be shot.

A few years ago there were two heronries near here, one about seven miles southwest and the other about three miles southeast, but hunters and so-called oölogists have annually entered these breeding grounds and shot the Herons by hundreds, leaving their beautiful skins and plumage to decay and spoil. I have known men and boys to go to these colonies and shoot every bird they could, and not being satisfied shoot through the nests, breaking the eggs or killing the young.

This practice has been kept up so much that the Herons are now confined to one colony only, but that is quite a large one, containing several hundred nests. It is situated in a low, wet, swampy piece of timber, about two miles from any cleared land.

A Great Blue Heron is very hard to kill, and I have known them, after being wounded, to whip out a good sized dog, so fiercely do they strike with their long beak and powerful wings.

The Great Blue Heron arrives here about the first of April and almost immediately begins to build its nest, or rebuild the one occupied by them the preceding year, if possible for them to do so. They begin laying about the 20th of April, and lay from three to five, sometimes six eggs, but the number commonly laid is four or five.

The eggs are a greenish-blue, closely resemble eggs of many species of the domestic Duck, both in size and color, but being of a rougher surface.

June 13, 1894, I visited the Herons, but as it was too late in the season to secure any eggs, unless a second laying by a bird previously robbed, I did not climb any trees but satisfied myself with studying their habits while feeding their young.

Upon my approach, the males would fly around in a large circle over my head while many of the females did not leave their nests till I would strike the trunk of the trees containing them, with a

stick, when they would fly into the air, or alight in the top of some tall tree and watch me and my actions.

Upon firing a gun, nearly the whole colony would fly into the air uttering their peculiar cry as they flew. Their nests are exceedingly hard to reach, sometimes being in the extreme top of a dead ash tree not more than a foot and a half in diameter at the ground, and running straight up without a single branch or stub on its trunk till the nest is reached, which is generally from eighty to one hundred feet from the ground, the trees not having a particle of bark on them. Here are a few dead limbs broken off about two or three feet from the body of the tree, and on these the nest is placed. I have seen nests built in this way, the trees at the nest not larger than a man's arm, the wind rocking it to and fro, making it exceedingly dangerous for any person to climb them.

The nests are so large that it is sometimes very difficult to get at the eggs, as one is obliged to remove the large sticks of which it is composed and make a hole large enough for the hand to be inserted, and in this way the eggs are reached and brought forth through the opening.

The Great Blue Heron also nests in large elm trees, selecting one with a very large trunk, and nearly always building at the extremity of a limb, generally a horizontal one and many are not strong enough to bear the weight of a man, thereby making it exceedingly dangerous to try to approach the nest.

I have seen as many as eight nests in the top of one large spreading elm, and the old Herons sitting on their nests, which would swing to and fro with every breeze. The nests are very large, usually about four feet across, and sometimes larger, being composed of sticks, some of them larger than a man's thumb, firmly stuck together,

and lined with fine bark or moss, but sometimes composed only of sticks.

The Great Blue Heron, being carnivorous, lives chiefly on tad-poles, frogs, fish, and crabs, and it is an interesting sight to watch the old birds feed their young. The old Herons swallow the food they wish to feed them, carry it to their nests, disgorge it, and it is immediately swallowed by the young, gluttonous birds. The Heron sometimes does much damage to fish-ponds preying upon the small fish and carrying them off, as they can easily swallow a large frog or a fish six or eight inches long. It is an interesting sight to watch the Great Blue Heron catch its prey. It will wade into a pond or creek till the water reaches a depth of about six inches, draw its head down upon its breast and stand perfectly still with its eyes closely watching the water. When some unlucky fish or frog gets within its reach it instantly stretches out its long neck and with an unerring aim strike its open beak down upon its prey. It then raises its head and swallows its prize, not even stopping to dispatch it.

Nearly all the Great Blue Herons leave for the south by the latter part of September, but a few remain much later.

DANA C. GILLET,
 Barre Center, N. Y.

(TO BE CONCLUDED.)

Climbing and Collecting.

It is impossible to give explicit directions for climbing, for different cases demand different treatment. Yet there are a few general directions which may help the oölogist. The following I have picked up from time to time during my egg collecting career.

In climbing a smooth tree like a sycamore, the climbers are apt to slip. To avoid falling from such a cause the following method can be used with success.

When climbing such a tree a light cotton rope—such as is used for clothes

line—about one hundred to two hundred feet long should be used as follows: Tie on to the end of the rope an iron nut or stone and throw over the first strong limb letting it slide back to the ground, and fasten to climber just under his arms. Then his companion grasping the other end steadies him as he ascends.

From experience I know that there is a great advantage in this mode, for besides securing absolute safety to the climber he can advance much more rapidly and will not be so tired as he would be without the aid of the rope. If additional safety is desired it may be had by embracing both the body of the climber and the trunk of the tree with a strong strap, long enough to permit abundance of space between the climber and tree. He leans back to keep the strap rigid and as he advances raises the strap above him.

An old and well established method is by using the strap alone in the manner above described. I could never learn to use this method but others have used it with good results.

There has been various devices in the way of light ladders, but my opinion is that they should not be used except in case the person collecting is by himself, for when two are together there is a much better substitute, which though very simple is not practiced as it could be.

It consists only in one climber mounting the other's shoulders. To be explicit let me call one of our collecting party number one and the other number two. Number one bends his back low enough for number two to straddle his neck. Number two obtains this position by advancing with his back to number one's face. Now number one raises to an erect position by pressing hard on his knees with his hand. Ten to one this brings number two high enough to reach the lower branches. This position is easily and quickly ob-

tained doing away with the short ladder.

To show the effectiveness of this system I will cite an actual case. While out collecting with a friend we found a Cuckoo's nest in one of those troublesome thorn trees which could not be ascended by way of the trunk. We were about to pass by, but being very desirous of the eggs we stopped and took a survey. There was directly under the nest a stout limb ten feet from the ground; three feet above and a little to one side was another. This limb divided into two smaller branches which would give a good foothold to one standing on them; six feet above was the nest. The situation and question was:—A nest was far out from the trunk of an "unclimbable" tree, and 19 feet from the ground. How was it to be reached? Easy enough. My companion bent his back and in a trice I could reach the first limb spoken of. Breaking off a few thorns I easily climbed onto it and was soon standing on the forked one three feet above. Now the nest was easily reached.

Oftentimes there are nests far out on slender branches which are left because the branches will not bear the weight. Many such nests could be taken by this method. If they can not be reached by sitting on the shoulders then stand or if needs be stand on the supporter's head.

To obtain this position is a little difficult, but can soon be mastered by practice. In this number one does not bend so far as before. Number two firmly grasps the shoulders and placing the right knee on number one's back lightly springs upward, placing the left knee on number one's left shoulder, then the right foot on number one's right shoulder he arises to a standing position. Now number one slowly arises, steadies number two by holding firmly to his legs. In doing this the shoes should be removed and it should be practiced at first at the tree trunk using it as a sup-

port for number one, while number two mounts his back.

When a nest has to be taken by sawing, the following is the best way: With a rope advance as far on the limb as possible and make it fast, carry the other end farther up the trunk and securely fasten. Don't cut the limb off near the rope but at a distance from the rope so that the portions on either side may balance. When it is nearly sawed be *sure* to hold firmly on to it otherwise it might spring back and knock you from your position. Now haul in the prize.

The following device often dispenses with cutting the limb. Make a wire loop one and one half inches in diameter. Sew on to this a bag of soft cloth two inches deep. Fasten the bag to a long thin jointed fish pole and the eggs can be scooped out very neatly from nests which could otherwise not be taken. Care must however be taken that the eggs are not pushed from the nest.

OTTO GRADY,

Ludlow, Ky.

The Bronzed Grackle.

This city has a number of sections of low land near it, and some of these boggy tracts are within the corporation and comprise the territory known at present as the 'Great Celery District.' The nature of the soil is low muck, often called 'river bottom,' and is undoubtedly the evidence that a body of water once stood in our charming valley, and extended all about the low flat lands.

In some quarters where the land was considered worthless a few years ago, not an acre can now be bought at \$500, and sections called impenetrable, useless tamarack swamps, are now peopled with industrious, money-making Hollanders who raise celery of National reputation; own the land and lay up money.

'When I was a boy' many of the tamarack trees were dead near the village. In these stubs the Bronzed Grackles or Crow Blackbirds built their nests, and for many years these situations were their only selections; and after finding the eggs in the hollows for years in succession, we had no doubt but that the Blackbirds always chose holes in dead trees. Once we found a nest built on a limb in a live tree, which contained Grackle's eggs, and we were at a loss to account for it. Some boys said that the bird was crazy, but most of us decided that it was a new kind of a Blackbird, and the value of the find was considered great.

Later, the tamaracks were rooted out and the land made into gardens, and then we expected to see the Bronzed Grackles (as we had correctly learned to call them) leave the country; but strangely enough, to our notion, they moved into the village and took possession of the tall evergreens. There they continue to colonize, and there are a dozen or more neighborhoods in our, at present city of 25,000, where the Bronzed Grackles gather and nest. In truth, in many parts of our city it is the most abundant species always excepting our NATIONAL CURSE, *Ubiquitous importation*, Linn.

Sometimes there are two and even three Grackle's nests in one large untrimmed evergreen. Generally not more than one, for although these birds are invariably gregarious in the Great Lake Region, still they are much disposed to squabble if two nests are in a tree.

I have repeatedly seen two nests begun in a tree, and later one pair of birds would drive the other away. They are noisy and aggressive and make a fearful racket at the season when the young appear. This species is prolific, and as they are much attached to their young, and competent parents the tribe increases, and there

is a veritable aggressive army in our city from March to October.

After a careful investigation, I am satisfied that two broods are always reared in a season, if the birds are undisturbed, and the male is not rarely seen building a nest while his mate is still feeding the brood which has left the first nest. It is an interesting sight to watch a pair build a nest. They are methodical and though very noisy when away from the tree are silent when near their nest. Both birds work together, and I must acknowledge that the old lady does the greater share of lugging; the old man mainly superintending the job, which is perhaps correct. He stays longer about the structure when he carries a load and it may be presumed that he not only deposits his own load but possibly also readjusts the work of his mate. Perhaps my lady readers will say that he was soldiering, and they may be right.

Some nests are completed inside of four days, and it requires over a week in a few cases, but the average is between five and six days. Not rarely the first egg is laid before the nest is fully completed, a condition which obtains at times with many other species, but the finishing work goes on.

The eggs are four, five or six and in one case seven were found. The average number is five and about as many are found with four as with six. They are too well known to need description from my pen. There are few, if any eggs which offer greater variation in color and markings in a single set, than is occasionally exhibited in the sets of this species.

It is a fact that the nests formerly universally placed in hollows, held larger sets than do the nests of today which are found built outside, and while many sets of six eggs were taken in the hollows, it is comparatively rare to find a set of six at the present day. If anyone is disposed to corroborate or

dispute this assertion let us hear from them through these columns.

During the period of incubation the birds share almost equally in the duties, although I am quite sure the mother bird spends more time on the nest during the day; but then the papa may make it up during the silent vigils of the night.

When the young appear both the parents strive to their utmost to serve the nestlings, and are unceasing in their efforts. At first, and when the young are but a few days old, one of the birds remain covering the brood while the other searches for food. As soon as the forager appears at the edge of the nest, the brooding bird dashes away and leaves the nest to the returning bird. This habit I have also seen in the case of the Robin and with others.

Within fifteen or sixteen days of the time when the young are hatched they are out of the nest and flitting about. They quickly learn to care for themselves and seem more able to protect themselves than young Robins, which latter, I consider the most stupid and clumsy young birds which I have met with.

A rookery of Grackles is a very noisy colony and when a generation of young is distributed in a neighborhood there is considerable noise for a time. Still I like to have them near and to watch the beautiful glossy males as they deliberately walk about under the trees.

The Bronzed Grackle is a valiant bird and will stick up for his rights in a very able manner if the occasion calls for it. Many of my readers have seen a Robin chase a Grackle and completely rout him, but I can assure you that the Blackbird had nothing to gain in staying and only left to avoid trouble.

One morning after a rain, when the Robins were busily engaged dragging earthworms to the surface and devouring them, as every observer has seen many times, a glossy Blackbird stood

near by and watched proceedings. Just as the Robin had completely pulled a huge worm from his hole, in hopped Mr. Grackle, and with a dash at Mr. Robin drove him away. He then grabbed the prey and flew to his nest with his enemy in useless pursuit.

Once I witnessed a battle between a pair of Grackles and a half-grown cat. Pussy was intent on capturing a young bird who had just left the nest and landed in the garden among the currant bushes. There was no escape for *Aeneas* for he was hemmed in by a fence, shed, and with a cruel enemy in front, and unlike *Aeneas*, when he eluded the Cyclops,* by the open sea, this traveler had no loophole to escape by.

The cat was crouching and creeping, and I imagine that young variety *Aeneas* was shivering, when up came the old folks and attacked Mr. Tom Cat. No sooner had they appeared on the scene than the old birds took opposite sides of the feline and endeavored to draw the enemy's attention. Then while the cat was looking at Mrs. Grackle behold Mr. G. drew near and gave Mr. T. C. a crack with his wing on the side of the head, which so rattled T. C. that he incontinently fled and the family was united in peace once more.

The Bronzed Grackle is a beautiful bird and a full plumaged male is about as commanding and graceful a species as you will find. He has a discordant series of notes and his voice is always harsh. But for all this I like to see these dignified fellows around the yard. They are extremely beneficial, and it is evident to all investigators that they should be protected. But they have not protection given to them, and are detested by nearly everyone.

MORRIS GIBBS,
Kelamazoo, Mich.

The Story of a Find.

To begin where I left off in the Oct.-Nov. number, I would like to say there was one mistake made, which, if not corrected, might be hard on my reputation for veracity, should anyone discover it, for I think I have previously written of finding Wrens' nests in houses. The article reads (p. 156, middle of first column), "and I have not as yet found a single nest except that it be in the timber." It should read, "and I have not found a single nest except Wrens, but that it be in the timber."

It might not be amiss to say, that, so far as we know, Mrs. P. and myself are the only ones in this or adjoining counties who take any Natural History papers or are in any way interested in the study of Nature, further than the raising of crops and the killing of anything supposed to be injurious to man or his estate. And while we are alone in this respect, we do not lack for good neighbors, friends and sympathizers. Of course we have by this time gained some kind of a reputation, and if you can trust me I will try and tell what it amounts to.

Socially and politically speaking, we were never treated with more respect in the North, and throughout the whole country the stranger is a welcome guest.

With some, our work is regarded as a waste of time and I've no doubt but that they *think* "cranks," but if they do they are never impolite enough to think aloud so we can hear it.

Mounted birds always attract attention, especially among the county folk, and the power to render such, seems beyond comprehension with many. It is quite amusing to set a large Owl on a show case in some store and watch the results. Did you ever try to "shoo" an Owl, or to attract its attention? Well, that is exactly what nearly every one tries to do, and one man actually thought the bird bit his straw hat when he was

* Strangely enough this cat had but one eye, and we called him Polyphemus.

trying to make it bat its eyes. His hat caught on his bill.

Aside from the curiosity of the things and an occasional Redbird for a present, there seems to be but little value in birds to the average resident. However, our knowledge of these things has won for us a position that is not to be despised.

Our work meets an occasional admirer, but never yet have we had a job brought to us, though we sell a few specimens (high colored), of our own collecting.

I have learned when all too late of a number of Bald Eagles and other rare birds being killed and thrown away.

We can convince a few that there is some benefit gained by a knowledge of the habits of different birds, plants, insects, etc., and through the aid of these few we gain some valuable data and sometimes specimens.

One of our near neighbors is of this class, yet they could not identify a dozen species of birds, further than to say "it's a Sparrow," "a Wren" or "Woodpecker."

There are three in the family, parents, and daughter, and are quite fond of pets especially birds and will not allow them disturbed. They are very kind to us too, and I have to respect their wishes, that is, I dare not disturb eggs, (no matter how rare to my collection) and let them know it. They live on the top the mountain while we do not, by some 400 feet, and as I am considered as not afraid of anything, I am called upon to help rob their bees, and several other annual jobs of work; so I am there often, and make it a point to stay late sometimes, and go by a bird's nest I may know of on their place. But there was one nest I could not rob this way. I had been there one day to help with bees, and Miss Neighbor wanted to know if that wasn't a House Wren building in their tool box in the shop. I investigated, (for I had not known of

that Wren building in this locality), and found the conventional nest of sticks, etc., packed away among a lot of plow points. I began to think the lady was right, when I heard a sweet song (all for our benefit), much more musical than the House Wren's, then a little scolding and in popped a "slim Carolina Wren with a long tail," which I recognized as *Thryothorus bewickii*. They were so glad that the birds built there, and so was I for I had spent many vain hours searching through brush piles, rail piles, log heaps and tree tops in one clearing, for their nests which I supposed must be there somewhere, from the way the birds acted and from the lateness of the season for them to migrate North.

Of course, I didn't hint around that I wanted those eggs (?) by telling them how valuable they were and that I had none in my collection. Well I went home that night, blaming them for not telling me to take the eggs, and I blamed myself for not inventing some plan to get them. I thought to go some night and get them but no, their dogs would tell on me. I at last hit upon a plan. I was sure I could persuade them to let me substitute the eggs with those of the Carolina Wren, but no Carolina's could be found and I gave up in despair. A week or so later they called on me again to rob more bees, this time at night. I took courage and armed myself with my baking powder can of cotton. Wife went along so we could stay all night. I purposed to make it an emergency if need be, and grease the eggs, on the sly of course, but what I got them. Luckily the emergency had happened, for on inquiry as to their welfare, I was told by Miss Neighbor that she thought the cat caught one of the birds, and if so I could have the eggs but not to say anything about it to the old folks. To make this long story shorter, I went out and could truthfully return and say

"the bird has left the nest," for she did leave it the moment I put my hand on her, and I spopped the nest, leaving the eggs in till morning for fear someone might find they were warm. Next morn I was first fellow out and of course I found "the eggs cold." But my "feathers fell" when I got home and found the eggs ready to hatch and the shells so tender I could not save one whole. I have learned not to covet my neighbor's property.

It is now nearly spring, Feb. 1st and a few days more will find the Robins and Bluebirds northward bound and crocusses will soon be open.

C. E. PLEAS,
Clinton, Ark.

Hawk Flights Noticed at Lake Forest, Ill.

My attention was first called to these Hawk flights in the fall of 1893. I did not make any notes on the flight of this year; but remember that the Coopers Hawks (*Accipiter cooperi*) predominated in it and it took place while a strong wind was blowing. The next fall while out walking one blustering windy day I again noticed large numbers of hawks flying quite high overhead. Unfortunately they were too far off and too high up to distinguish with certainty but the slender body, the long pointed wings and the graceful flight immediately assured me that the greater part of them, as was the case the year before, were the Cooper's Hawks. I also noticed some others that resembled the Cooper's Hawks closely all but for their smaller size; these I took to be the Sharp-shinned (*Accipiter velox*). These two species comprised the greater part of the flight. Many other varieties of the larger hawks however were to be seen but not closely enough to be indentified. No more hawks were noticed in any numbers after this one windy day that year.

This fall of 1895 has favored me with the best opportunity so far of observing the migrations of the hawks. A severe rain and wind storm occurred on the night of Sept. The next day, was raw and chilly with a strong wind blowing from the Northwest. From my observations thus far I am lead to believe that the hawks anticipate just such a day as this to migrate on. It was about the middle of the morning before they were noticed in any numbers and they seemed to increase from this on until the middle of the afternoon. It was a very pretty and interesting sight to watch them as they would suddenly come about and careen gracefully to the wind. The Ospreys in particular showed themselves off to excellent advantage here, for the pure white under parts and the black on the cheeks and head stood out in bold contrast to each other. Again with set wings they would glide smoothly and swiftly by. These actions were noticed of all the other hawks more or less but none approached the Ospreys in gracefulness and beauty. The Cooper's Hawks again held their own in numbers, as did also the Sharp-shinned. These two species were generally noticed quite near each other but the Pigeon Hawks also seemed to have a special desire to be given in company with the latter. A Red-tail is occasionally seen sailing high above the rest, holding itself aloof from its smaller relatives; next comes a solitary Red-shouldered, distinguished by its barred wings and tail; then a Broad-winged and a single Marsh Hawk concludes the list that was noticed. They were to gradually diminish in numbers toward sundown when a solitary Osprey flying silently and gracefully by marks the close of this unusually interesting hawk flight.

JOHN F. FERRY.

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FRANK H. LATTIN, Editor and Publisher,
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ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

Nesting of the Belted Kingfisher, *Ceryle alcyon*.

Until last spring I thought I was never going to have the good fortune to find a Kingfisher's nest. But at last the good fortune came to me, and then of course I could find as many as I wished.

Many have spoken of this queer way of finding nests after the first one has been discovered, but I think it is easily explained. Whether or not I can give

expression to my idea I do not know but will try. It is this way:

We have thoroughly studied the nesting habits of the bird whose nest we wish to find, from reading. But although we know perfectly where to look, from the knowledge obtained by reading, yet strange to say when we look in such a place there is no nest. What is the matter? This question is answered and explained later.

We accidentally find what we have been searching for. The place coincides in description with the book description, but it does not look as we thought it would. After the first discovery we somehow instinctively associate what we have learned by reading, with that learned in the more valuable way—viz: by experience. The thing is now easy and we find the nests quite often.

My first Kingfisher find was made May 4, 1895, in company with Fritz Raymond. We found several nests in the banks of a small stream in Kenton Co., Ky. These nests, or rather holes, were near each other and in a bank which arose eight feet from the water, which was one foot deep. As there seemed to be no indications of a nest in the holes we pushed on down the creek and near its mouth found a hole, which appeared to be newly made. We cut a large reed and thrusting it in, thought we could feel something shaking it. On withdrawing it we were surprised to see a Kingfisher hanging onto the end with desperate fury. On seeing us she immediately retreated, and although she still resented the intrusion of the reed could not be induced to again come to the mouth of the tunnel.

With a mirror we could plainly see the bird by throwing in a ray of light. However we could not tell whether the nest contained anything or not, as the end of the cavity was scooped out below the level of the rest of the tunnel. We left the nest resolved to visit it later.

By the way, Fritz's mirror scheme above referred to is used quite efficiently in looking into cavities in trees and Woodpecker holes besides lighting crevices and tunnels.

The following week Fritz found a promising hole in the bank of a creek in Hamilton Co., Ohio. But the farmer was near, and he did not get to look at it then.

On May 11th we again visited the nests in Kenton Co., Ky. We started at two o'clock in the morning, so we could arrive on the ground in time to dig out the holes before the natives were about, for the farmers might think we were "swiping" something, and when a Kentucky farmer gets that idea he is not safe to "monkey" with. Well, we were disappointed in the first hole for there was nothing in it. Perhaps running the reed into the cavity caused the bird to desert the nest.

Then we proceeded to the other nests and there were rewarded by a set of seven beautiful pearly white, nearly round eggs. The other holes contained nothing. However one of them was very interesting. This nest had two entrances, which at the bank were about two and one-half feet apart, curving inward to a common point. I found one other nest of this sort and give below the exact note which I took in the field.

May 18, 1895:—Belted Kingfisher:—Nest built over running water, ankle deep. Bank, hard, rocky. On putting my hand into hole, surprised to see the bird fly apparently out of the solid bank at a short distance. Examination showed that there was another entrance to the nest (have found one other of same sort). The two holes three feet apart. The nest not so full as usual of fish scales and bones. But for the small amount of fish scales and bones, eggs laid on bare ground. Eggs six, four incubated.

On May 25th we went out to the nest

in Hamilton Co., Ohio. We got six eggs, so rotten that it was impossible to blow them. The remains of a dead Kingfisher lay on the ground under the nest. Why do people persist in making warfare against so fine a bird as the Kingfisher? As soon as the "sportsman" sees one he is in high glee, and nothing will do but to shoot it.

In the above nest, besides the rotten eggs there was a Swallow's nest just in front of them. I could not find out whether it was that of a Bank Swallow or Rough-winged. Does the Bank Swallow ever build in a cavity, which it itself has not made?

During the day we found a nest containing seven well incubated eggs and another with five young. On lifting one of the little fellows from his home he looked about the grass around him and standing as firm as he could, uttered a surprised "why how's this?"

In our dealings with the Kingfisher we became very expert in excavating into his home. Our first thing to do was to run a stick into the hole and measure its length. Then to measure the distance from the mouth of the hole to the top of the bank. If the former distance was the greater we then found the slant of the hole and laid out the distance in and slant, on top of the bank, and digging down always hitting the cavity just in front of the nest. But if the latter was the case we dug directly into the bank.

I have read that the Kingfisher usually builds two or three feet from the top of the bank under a plowed field. As I have found this to be the case I have sought the cause. I think they build so because the soil is much softer here than it is further down. I think the plowed field has no attraction for the bird, except that the bank immediately under the plowed ground is much softer than the rest from the plowman's working of the ground. I have found nests in banks ranging from

four to thirty feet high and the nests at distance of a few inches from the top to fifteen feet. When several nests were in a single bank all of them were in the same horizontal line, or at least in the same stratum of soil. Another nest which I examined was in a hard, rocky bank. The hole was dug into a small soft spot,—the only one in the bank,—entirely surrounded by stones. From such comparisons I have concluded that the Kingfisher has no preference whatever in the distance its nest is from the top of the bank, but seeks the softest part. I am still further confirmed in this belief by finding nests at various heights in banks of uniform hardness.

The Kingfisher is very much attached to her home, and will not leave her nest, when the egg hunter is digging for her treasures, until the cruel spade or trowel is almost upon her. *Ceryle alcyon* is deserving of much study as some of its habits vary greatly from those of other kindred birds.

OTTO GRADY,
Ludlow, Ky.

Great Northern Shrike Nesting in Assiniboia.

In reviewing "Bird Nesting in North-west Canada" in the *Auk* Dr. Shufeldt ridicules the idea of my finding the nest of the above bird in Assiniboia.

I am therefore pleased to read in Mr. Arnold's article on his trip to Assiniboia, in the March OÖLOGIST, page 20 "that he found a nest and seven eggs of the Great Northern Shrike," thus confirming my statement that a few pairs of this Shrike nest in Assiniboia. There was absolutely nothing known of the ornithology of Assiniboia previous to my visiting this vast province in 1891. It is gratifying to me to find other oölogists who have recently made collecting trips to Assiniboia, confirming my statements that a few pairs of such birds as Great Northern Shrike, American Rough-legged

Hawk, Hawk Owl and American Goshawk, remain and nest in Assiniboia and Alberta, although of course this is about the limit of their southern range in summer as the majority go still further north to breed.

W. RAINE,
Toronto.

A Few Odd Eggs.

As nearly all oölogists have at some time obtained curious specimens, some of them may find it interesting to compare notes with the following. Then let us ask some of our more advanced friends to explain the cause of these abnormal eggs. The OÖLOGIST is a scientific paper; from its columns let us get scientific explanations for extraordinary occurrences in nature.

On May 24, 1893, I was wading through a small swampy pond of about an acre in extent looking for Sora Rails when I chanced on a Redwing's nest, and, on looking in, I saw four beautiful but unfinished eggs. I say unfinished because the bird had not thought it worth while to put on those artistic spots and blotches which we generally see. Here, then, was my first experience with albino Redwing eggs. This set was of a delicate blue color, and, but for a single spot on one egg, was without spots.

In June, 1894, I was on a botanizing trip on Regie Lake and while pushing my canoe through a swampy tract where the weeds and rushes grew high and strong, I came on a Redwing's nest which contained one fresh egg. As I was unable to remain in the vicinity long enough to get the other eggs, I had to be satisfied with the single. This egg was of a pale blue color and also unspotted like the set above.

In my collecting trips I have run across albino Bluebird's eggs, and runt eggs of many species. Among the oddest runt eggs I have are those of Kingbird, Robin, White-rumped Shrike, Chipping Sparrow, Bank Swallow, Yel-

low Warbler, Cowbird and Cedar Waxwing, many of which are less than half the normal size and defy identification.

R. W. JOHNSON.

Port Hope, Ont.

Eggs of Belted Piping Plover.

As I am not aware that the eggs of this species has been previously recorded, perhaps the following will be of interest to the readers of the OÖLOGIST.

Mr. Oliver Spanner, Taxidermist, of Toronto, after reading "Bird Nesting in N. W. Canada," decided to make a trip to Lake Manitoba to collect eggs and skins and while there he was fortunate to take eggs and skins of the Belted Piping Plover. He found a nest containing three eggs on June 19, 1895, at Birch Island and shot the female as she left the nest and both the eggs and skin are now in my collection.

The nest consisted of a depression in the sand lined with a few weeds and the eggs are pale buff, finely spotted with black and purple grey. At the same time he secured young birds in down, and also shot several specimens of Solitary Sandpipers which were no doubt mating in the vicinity.

W. RAINE, Toronto.

Peculiar Nesting Sites.

Sometimes birds select such unusual sites to build their nests that we may wonder why they do so when there are plenty of natural sites in the locality. There is a large deep gulley which runs at right angles from Keuka Lake and in some parts of this gulley are perpendicular banks of slatestone but mostly covered with large coniferous trees.

Projecting from one of these bare slatestone banks there is a narrow ledge or shelf of rocks which is about 100 feet from bottom of valley and 35 feet from top. Above this ledge the bank is cov-

ered with moss, ferns and shrubs, while below it is bare and concave

It was in the middle of May, 1889, that I first noticed this shelf, and out of curiosity I let myself down upon it by holding onto some firm roots which protruded from the bank, when lo! I discovered that I had dropped into a Great Horned Owl's nest and there sat a young Donwy Bubo trying his best to stare me out of countenance. No attempt had been made to build a nest—merely a depression in the loose pieces of slatestone. In a crevice near the nest there was stuffed a Ruffed Grouse which was fresh and about half eaten.

Another peculiar site was selected by a pair of Chimney Swifts down in a well 10 feet from top of curbiag and the nest being glued onto a smooth hard stone and contained a family of five. I removed the curb which was a box affair about 3 feet square and went down to examine the nest. While doing so the parents made frantic efforts to reach their dusky children by diving with the speed of an arrow into the misplaced curb. I afterwards learned that the young birds got out safely. Date of finding nest July 14, 1895.

Again on July 25, 1895, I discovered another nest of Chimney Swift in the garret of flour mill where noisy cog wheels and rumbling machinery keep up an incessant racket. Yet these plucky birds glued their nest to the board siding and reared a family of five. How they ever darted into the small opening in the peak of mill without getting caught in belts and cog wheels is a mystery to me. It may be of interest to add that although the ever-present English Sparrow enters this same hole to feed on the grain scattered about. They did not disturb the Swifts in any manner. Nor have the English Sparrows ever attempted to build nests in the garret although there are thousands of them here.

C. F. STONE,
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Set, 20 var., unused, French Colonies	40
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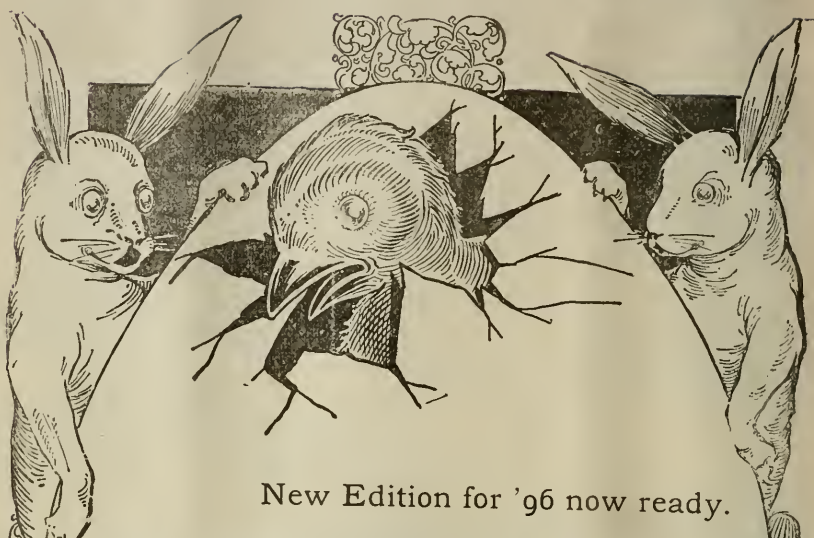
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New subscribers to THE OOLOGIST are always in demand and during the months of April and May its publisher will give 50 cents worth of premiums for each new subscriber a present subscriber may send him. This 50 cents worth of premiums must be selected from the list of premiums given on this and the preceding page and ten cents must be added to cover the mailing expenses of the present. Remember the new subscriber can accept the \$1 premium offer will secure all the perquisites connected with the same and this 50 cents worth of presents is an additional offer on our part made to present subscribers who will assist in enlarging the subscription list of our little monthly.



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FRANK H. LATTIN, Publisher,
ALBION, N. Y.





OÖLOGIST.

Monthly.



VOL. XIII. NO. 5.

ALBION, N. Y., MAY, 1896.

WHOLE NO. 127

Wants, Exchanges, and For Sales.

Brief special announcements. "Wants," "Exchanges" "For Sales." Inserted in this department for 25¢ per 25 words. Notices over 25 words, charged at the rate of one-half cent per each additional word. No notice inserted for less than 25¢. Terms, cash with order.

"DEALERS" can use these columns at *Regular Advertising rates, only*.

Strictly First-class specimens will be accepted in payment at one-third list rates.

Exchange Cards and Coupons (subscription) will be accepted according to conditions stated thereon.

EXCHANGE:—White-faced Glossy Ibis eggs, sets or singles, to exchange for eggs of other localities. Send list of eggs to exchange. EDWARD R. BAKER, Fort Collins, Colo.

WANTED:—A well-bred, thoroughly trained hunting dog, pointer or setter. Can offer choice A1 sets, singles, medical works, some cash. Eggs in sets for exchange. DR. M. T. CLECKLEY, 457 Greene St., Augusta, Ga.

DAVIE'S "NESTS and Eggs of North American Birds." I want good new or 2d hand copies of either the 3d or 4th editions. Will pay cash or give good exchange. Write stating what you want for your copy. FRANK H. LATTIN, Albion, N. Y.

FOR SALE OR EXCHANGE:—Fine series of eggs of 629, 15 sets, 83 eggs. Full data. Sell for \$3. Many other sets for exchange. Send lists. WM. L. ATKINSON, Box 147, Santa Clara, Cal.

TO EXCHANGE:—First-class and carefully prepared sets of eggs to exchange for mounted birds, complete on bases. WILLIAM L. COMSTOCK, 37 West Main St., Norwalk, Conn.

WOULD LIKE to hear from persons wanting to exchange eggs and insects this season. TROY EAKHART, Mulberry, Ind.

TO EXCHANGE:—I will exchange rare stamps and birds eggs in sets for Indian relics. Sto axes especially desired. F. MCKAY, Girard, Kans.

WANTED:—Photographic supplies and books on Photography and Chemistry or a good microscope. Have for exchange good sets and skins and a few books. FRED McALLISTER, Davison, Mich.

WANTED:—A few fine drawn glass blow-pipes. Will pay cash or exchange eggs. Sets of White-rumped Shrike to exchange for other sets. FRED MALTBY, Olathe, Kansas.

FOR SALE:—To highest bidder a 4x5 camera and outfit. Cost \$12. FRANK S. FIELD, 825 Garfield Bldg. Cleveland, Ohio.

PAIR of Blower Pigeons for sale or exchange. Send list. All letters answered. Eggs of North Detroit gathered during the coming season. Cheap rates. GEORGE COLE, 12 Street & Joy Road, Detroit, Mich.

FINELY PREPARED SKINS of Western Horned and American Barn Owls. Great Blue Heron, Western Red-tail and Shovellers in nuptial plumage and very beautiful. Any of above at \$1.00 each. Have other skins equally cheap. EDMUND HELLER, 193 Rubidoux Ave., Riverside, Calif.

FOR SALE:—Tame rabbits at 75¢ a pair. I have them pure white or black or spotted. Stamps not taken. CLARK CRYOR, Albert Lea, Minn.

FOR EXCHANGE:—First-class western bird skins for eggs in sets, or will sell cheap for cash. Have over 100 species. WALTON I. MITCHELL, 524 Summit Ave., St. Paul, Minn.

FOR EXCHANGE:—A live Screech Owl for books on natural history or taxidermy. CHAS. TUCKER, 14 St. Gregory St., Mt. Adams, Cin., Ohio.

DAVIE'S "Nests and Eggs," paper, \$1.00. cloth, \$1.50; "Our Birds in Their Haunts," \$1.75; Davie's "Naturalist's Manual," 50¢; Hooker's "Natural History," 50¢; "Kingdom of Nature," \$2.00. C. B. VANDERCOOK, Odin, Illinois.

TO EXCHANGE:—A fine male Great Blue Heron, nicely mounted, for best offer of minerals. CHAS. SMITH, Clarence, Iowa.

IF YOU have any birds skins or eggs to exchange why hunt around the corner for someone you never heard of to arrange an exchange? I want many common skins and eggs and can offer some very desirable skins and eggs for same, and at even rates if you have anything equally as desirable. List of duplicates for stamp. J. P. BABBITT, Taunton, Mass.

FOR SALE OR EXCHANGE:—My entire collection of birds eggs. About 400 eggs, some 1st and 2d class. A good bargain for some beginner. What have you to offer. Send for list. DIAH SWEET, Box 118, Strong, Me.

EXCHANGE:—Skins, eggs, stuffed birds, deer heads, etc., for skins and sets or offers. Only good specimens wanted or given. JOHN CLAYTON, Lincoln, Maine.

WANTED AT ONCE:—Good safety bicycle, pair opera glasses and good collecting gun. Can offer large lists of any of the following to select exchange from viz. Indian relics, eggs in sets, minerals, skins, fossils or mounted birds. Will give good exchange. GEO. W. DIXON, Watertown, S. D.

WANTED:—Agents for sale of Fishscale Jewelry—a very attractive novelty, sets, pins and scarf-pins. Will exchange for fancy or useful articles, canaries, books, music, plants or bulbs. For terms and price-lists address MRS. W. T. CATHCART, Upper Alton, Ill.

FOR SALE:—Choice sets of eggs valued at about \$80.00. Will sell them for \$35.00 cash. Have such sets as the rare Spotted Owl, Whistling Swan, Florida Dusky Duck, Siberian Gull, Golden-crowned Kinglet, Winter Wren and others equally as rare. ARTHUR W. BROCKWAY, Hadlyme, Conn.

CHEAP SETS with data. Send in your orders at once for the following sets: A. O. U. Nos. 416, 735, 731, 729, 675, 428 and others of this locality. Send stamp for list stating your wants. W. L. FOXHALL, Tarboro, N. C.

CAMERA WANTED:—A 5x8 or larger of good make. I can also use a Pocket Kodak or Kombi or perfect Indian relics. I can offer the following first-class skins, also other articles: Red-tailed Buzzard, Marsh Hawk, Pied-billed Grebe, Horned Grebe, American Merganser, Golden-eye, American Bittern, Black-crowned Night Heron, Great Blue Heron, Ruffed Grouse, Loon, Bald Eagle. L. V. CASE, Geneseo, N. Y.

GEORGE SCHOOL, April 12, 1896.

I put an ad. in your paper last year and it never came out until after I had gone to school. Of course I could not answer any letters or do any exchanging away at school, but I must have received 100 answers. I am very sorry for the parties but I could not help it and if you would say something in the next OOLOGIST to that effect I would be very glad. It certainly is a great advertising medium. BEN S. CARPENTER, George School, Pa.

TO EXCHANGE:—A genuine Dueber gold-filled, hunting case, stem wind and set watch. Made by Dueber Watch Case Co. Fitted with an 11-jeweled Springfield movement, fully warranted for five years. Have both gent's and ladies' size, brand new. Will exchange for \$45.00 worth of fine sets. GEO. W. DIXON, Watertown, S. D. M-3t.

HAVE JUST purchased over fifteen thousand specimens of fossils, ores, minerals, Indian and Mound Builders' relics and curiosities. I can give some excellent exchanges. Rare eggs and mound relics especially desired. GEO. W. PITMAN, New Castle, Ind.

FOR EXCHANGE: Sets and singles for same. A. O. U. Nos. 383, 412, 441, 456, 466a, 467, 488, 489, 540, 560, 563, 581, 598, 612, 613, 614, 616, 652, 704, 735, 759b, 761, 766. Also a few skins and a C. G. Conn's triple silver-plated cornet cheap for cash or for good Kodak or printing press. G. T. BROWN, No. Turner, Me.

OOLOGIST'S outfit, value \$10, to exchange for rifle, revolver, automatic reel or good fishing rod. Write what you have first. D. B. MECORNEY, Lockport, N. Y.

TO EXCHANGE:—Fine sets of western eggs with data for any large eastern sets. A. J. O'CONOR, JR., San Diego, Cal.

GREAT BARGAINS IN CURIOS:—Photographs of Warner's Cobweb Palace, 5½x7½ in., 25cts. each.—One of the greatest curiosities in California—old saloon festooned with natural cobwebs, never cleaned; Chinese Joss Punk Sticks, 15cts. pkg. also Chinese Ornamental Masks 25cts. each, Elk Teeth for Charms \$1.50 each. Address E. W. CURRIER, Taxidermist and Curio Dealer, No. 427 Sutter St., San Francisco, Calif. tf

WANTED to exchange with advanced Oologists the present season. Can offer southern sets. Choice sets for singles of 35, 104, 112, 183, 188, 204, 205, 206, 328, 336, 352, 356 and Emeu. DOCTOR M. T. CLECKLEY, 457, Greene St., Augusta, Ga. A-3t.

CHEAP FOR CASH:—A first class 4x5 Kodak all latest improvements. Just what every collector needs. Also Pocket Kodak for sale. Correspondence solicited from everyone desiring a good camera. GEO. GRAHAM, care Florida Business College, Jacksonville, Fla. O

FOR EXCHANGE.—I will exchange a secret for trapping foxes by scent which will call them ½ mile to the trap. The scent has to be made in April and it costs you nothing to make it, and until May 15 I will exchange the secret for \$10 cash or \$12 worth of such things as I can use in the line of Microscopes, Telescopes or Field Glasses, Mounted Birds, Rare Eggs, Books and U. S. Stamps. No cards answered. Address, WALTER E. McLAIN, Box 70, New Vineyard, Maine. 63-3tO

"AUKS" Wanted.—I will allow 50c each for any back number of the "Auk" you may have, if in good condition and sent prepaid. You to take your full pay in Bird Skins, Eggs, Shells (showy or scientific), Corals, Echinoderms, Fossils, Minerals, Indian Relics, Curios or Novelties as listed in the Premium List Supplement. I can also use on same terms the following Numbers of the OOLOGIST at prices quoted: June, 1888, 25c; July-Aug., 1886, 15c; Jan.-Feb., 1887 or Dec., 1886 with same attached, 20c; June-Sept., 1887, 15c; Apr., 1889, 12c. All must be complete, clean and in good condition. I will also accept back No's. of the Ornithologist and Oologist or Nidologist any issue and in any quantity at 5c per copy on same terms. I can also use books on subjects pertaining to Natural History if in good condition and cheap, also A No. 1 sets of eggs with data at ½ "Standard" rates. Lists of books and eggs must be submitted for my selection or approval before sending. Address at once FRANK H. LATTIN, Albion, N. Y.

SNOWY OWLS. to be sold: Live bird, quite white, sound, eats well, \$5 net. Bird in meat, nearly immaculate, in perfect condition, \$5 net. Bird mounted, a pure white specimen. \$7 net. P. B. PEABODY, St. Vincent, Minn. O

I WANT AT ONCE the following A. O. U. Nos.: 5, 31, 35, 47, 76, 108, 117, 190c, 122, 123b, 172, 187, 206, 216, 226, 238, 274, 281, 288, 293, 293a, 328, 355, 356, 366, 402, 408, 399, 418, 428, 434, 449, 474c, 478, 480, 482, 484, 486, 492, 537, 574, 575a, 588, 587a, 629, 630, 637, 615, 654, 662, 667, 671, 685, 686, 707a, 711, 716a, 734, 741a, 752, 768. All singles. Rare ones to be accompanied by data as to locality and collector. Sets taken where one constitutes the set. For any of these I will give good exchange in other eggs, showy shells, minerals, curios, etc. Address ERNEST H. SHORT, Albion, N. Y. O

TO EXCHANGE.—B b Cornet, watch, stamps and finely stuffed and mounted birds and mammals, heads on shields, collections in cases. Wanted: Bicycle, medical books, surgical and taxidermist instruments. All letters answered. Address, F. S. HAGGART, Taxidermist, Chagrin Falls, O. O

EGG COLLECTORS. Attention.—May 15th I will issue a Special Bargain Egg Bulletin, giving full list of sets on hand and prices at which I will send them. As I wish to close out all on hand, ready for new seasons collecting, I will sell at about 1/4 regular catalogue rates. All sets first-class and guaranteed. List free. Send your name on postal. List will contain about \$500.00 worth. GEO. W. DIXON, Watertown, South Dakota. O

ARIZONA and California bird skins to exchange for those from other localities. *Fringillidae* especially desired. WILFRED H. OSGOOD, San Jose, Cal. O

OREGON EGGS. My entire collection, amounting to about \$150 must be sold, regardless of price. Sooty and Oregon Ruffed Grouse, Macgillivray's Warbler, Varied Thrush, etc. Complete data. Price list free. ARTHUR L. POPE, McMinnville, Oregon.

"NATURAL SCIENCE NEWS." Vol. I complete. Less than ten complete vols. left. Will send you one for only \$1.00. Vol. II complete, 14 Nos., only 30 cents. Complete your files. Will furnish Nos. 1 and 2 at 10c each. All others 5c each or in lots of five or more 4c each, or ten or more 3c each. (Nos. 1 and 2 are always 10c per copy net.) FRANK H. LATIN, Albion, N. Y.

Ripans Tabules cure indigestion.

FOR SALE or EXCHANGE.—Philatelic Journals and Papers, for scientific books and magazines, minerals, herbarium specimens, etc. Send for list. CHAS. G. NASH, 41 Grand St., Woonsocket, R. I. O

FOR SALE AT AUCTION.—A fine collection of minerals, fossils, Indian relics, shells, old arms, etc., etc. Send stamp for catalogue. J. S. SILVIA, Acushmet, Bristol Co., Mass.

FOR SALE.—Bicycle, Lovell, in good condition for \$25 cash. Collection stamps, 2,000 varieties, will sell cheap, also eggs to exchange. C. B. HODGE, Sterling, Kans.

PRINTING OUTFIT For Sale.—A 3x5 self-inking Excelsior press, nearly new, four fonts of job type, borders, furniture, leads, cases, inks, etc., all complete. First person sending me \$6 gets the above outfit. It is a bargain to somebody. THOS. H. BLODGETT, Galesburg, Ills.

EVERY COLLECTOR should send 5 cents to James P. Babbitt, Taunton, Mass., for his large illustrated catalogue of Taxidermists' Supplies. Oölogists Supplies and everything used by the Naturalist. Some of the things found in his catalogue are Printing Outfits for naturalists, at 26 cts to 55 cts; New Safety Egg Drill at one-half price charged for the old kind and they are twice as good; Babbitts' Glove Kid Tanning Fluid is so simple that any boy can use it with out practice. It is used by professional Taxidermists and Furriers and is the best tanning fluid on the market. You will also find his famous Auxiliary barrel listed as well as complete outfits to go with them. A collector is dead to his own interest who has not got one of his catalogues.

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COLLECTORS Attention! Gulf Coast Eggs, Skins and Shells collected to order, cheap for cash only. H. E. PENDRY, Myers, Fla. ONt

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DEAR SIR:—I am anxious to have you see a collection of the Famous Herkimer County Crystals, hence I make you this offer: If you are a subscriber to this paper, let me send you by return mail, post-paid, 36 of these Brilliant Gems: if they please you send me 72 cents, if not satisfactory return the collection and it will be O K. Yours respectfully, A. B. CRIM. Middleville, Herkimer Co., N. Y.

OPALS, Minerals, Cut Gems and Natural History Specimens. Will buy, sell or exchange. List for stamp. ROBERT BURNHAM, 15 Chestnut St., Providence, R. I. 51-25t

FOR SALE OR EXCHANGE.—Malachite, Crysocholla, Chalcedony, Quartz, Azurite, Monazite and Franklinite, Microscopic slides, Infusorial earth 100 localities, Trap-tufa and rocks for sale or exchange for other minerals or Microscope slides or Infusorial earths PROF. ARTHUR M. EDWARDS, Newark, N. J. O. & N. tf

FOR SALE.—Obsidian arrowheads and knives from Mexico, cheap for cash. Am closing out present stock of minerals and will give unheard of bargains—20 pounds for \$1. More if you want it. Have a large stock of bird skins, shells, and corals at very low prices. ROBERT BURNHAM, 15 Chestnut St., Providence, R. I. PO.

COLLECTION of 650 eggs (175 varieties) value \$90; also minerals, to exchange for a Pearl rotary printing press, 7x11 in. If not a Pearl, what kind and size have you to offer? A. L. STEVENS, 10 Arlington St., Northampton, Mass. O

CASTS of large, rare and extinct birds' eggs. Great Auk, 60c; Apteryx, 50c; Emu, 45c; Rhea, 45c; Ostrich, 50c; Golden Eagle, 50c; Bald Eagle, 40c. Any of the above casts sent postpaid on receipt of price. Epyornis, \$2.50; Moa, \$1.75. Dealers please send for wholesale rates. N. P. BRADT, Hindsburg, Orleans Co., N. Y. PO

I have some scientific and other books which I will sell cheap for cash. Parties meaning business should address, with stamp, for reply. JOHN DOELLE, Yale, St. Clair, Mich. O

\$100.

We employ experienced agents on a salary of \$100 per month. Others at \$60. Write quickly. PURITAN PUBLISHING Co., 36, Bromfield St., Boston, Mass.

Wanted—An Idea Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write JOHN WEDDERBURN & Co., Patent Attorneys, Washington, D. C. for their \$1,800 prize offer and list of two hundred inventions wanted.

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YEARS OF INTENSE PAIN.

Dr. J. H. Watts, druggist and physician, Humboldt, Neb., who suffered with heart disease for four years, trying every remedy and all treatments known to himself and fellow-practitioners; believes that heart disease is curable. He writes:

"I wish to tell what your valuable medicine has done for me. For four years I had heart disease of the very worst kind. Several physicians I consulted, said it was

Rheumatism of the Heart.



DR. J. H. WATTS,

It was almost unendurable; with shortness of breath, palpitations, severe pains, unable to sleep, especially on the left side. No pen can describe my sufferings, particularly during the last months of those four weary years. I finally tried

Dr. Miles' New Heart Cure,

and was surprised at the result. It put new life into and made a new man of me. I have not had a symptom of trouble since and I am satisfied your medicine has cured me for I have now enjoyed, since taking it

Three Years of Splendid Health.

I might add that I am a druggist and have sold and recommended your Heart Cure, for I know what it has done for me and only wish I could state more clearly my suffering then and the good health I now enjoy. Your Nervine and other remedies also give excellent satisfaction." J. H. WATTS.

Humboldt, Neb., May 9, '94.

Dr. Miles Heart Cure is sold on a positive guarantee that the first bottle will benefit. All druggists sell it at \$1.60 bottles for \$5, or it will be sent, prepaid, on receipt of price by the Dr. Miles Medical Co., Elkhart, Ind.

Dr. Miles' Heart Cure Restores Health

Come to Florida.

A fortune can be made in a few years in pineapples and tomatoes; vegetables raised the whole year. An ideal home. For particulars write **R. P. Osler**, Avon Park, Fla. 29&Otf

THE OÖLOGIST.

VOL. XIII. NO. 5.

ALBION, N. Y., MAY, 1896.

WHOLE No. 127.

The Taking of Notes

While this subject is being spoken of in these columns I would like to make a few remarks upon the subject. Not that I consider myself capable of giving pointers to our old workers; but I would like to impress upon beginners (and perhaps a few others also) the importance of putting down what we have learned in a form that may be of use to others after us and an aid to ourselves while we are still here.

It is a debt that we all owe to science. After deriving benefit from Audubon, Wilson and others it is our bounden duty to endeavor to add our little mite to the general fund of knowledge. I do not mean that we should rush indiscriminately into print and publish books; for there is not one in two hundred who know enough *new* and *valuable* to fill even the smallest book. But we should keep a note book and try to make it the repository of *all our knowledge*.

A great many of our notes may, at the time, seem worthless but that is no sign that they always will be so. The most unlikely note may some day turn out to be the solution of a vexed problem. Facts seeming commonplace at the time of their occurrence may, by the light of future observation, be of great worth. Therefore, take notes, copious notes. The largest percentage of them will be trash, but it every worker learns one new fact the result, on the whole will be great.

The next important consideration is, in what form shall the notes be kept? The problem here is to put *all we know* in such a form as to be most easily worked upon, so that we can find a re-

quired fact with the least expenditure of labor. There are two ways generally used for note books. One is to keep a sort of running journal of each day's work, another is to put down the notes on each species in a certain space provided for that bird alone and where no foreign matter is allowed to intrude.

These two ways are both open to objections. In the first, finding all our notes on a certain bird necessitates searching through all our notes, those pertinent and those not. The second obviates this, but then, how can we compare seasons or do other such work without infinite drudgery?

I have a system of note-keeping that gets around these difficulties. I use two note books. In No. 1 I keep a record of every day's notes together with a migration list and a weather chart. The latter, I think, is important showing, as it does' the effect of climatic influence on the birds. I indicate the temperature by a wavy line and the other conditions, such as wind, snow, rain, etc., by different ciphers. Thus a plan of the whole season is laid before me, which I can take in at a glance. My second volume is divided off into spaces, one for each species I am likely to meet with, and a number of pages allowed for at the end to put "unexpected finds." The headings for the species are, of course, inserted according to the class if in order. Into this book I "post" the notes from my first volume. In this way I have everything so that I can put my hand on it with the least amount of trouble.

I make it a point to write out my journal immediately on returning from a trip, while the facts are fresh in my memory. The posting can be done at

any time. During the long winter evenings when there is nothing else Ornithological to do, it is pleasant and profitable to sit down and read over, and post, and muse, and theorize. Then is the time that an Ornithologist does his real work. During the collecting season he is only getting data upon which to think and work over at his leisure.

A third volume could very well be added. If one is anything of a draughtsman he can use it for drawings of special resemblances, abnormalities, etc. Or to keep tabulated the results of dissection for food, time of migrations and incubation period. In fact, a whole host of statistics could be accumulated here which would be of great value.

In this way I think everything can be put down in a manner that one might call "gettable." It makes matters easier to use along with the second-volume a good list of the locality in which you work. I use Cook's List of the Birds of Michigan. It would be a tedious thing to sit down and write out the headings for each species at one time so I only write them as I need them. To do this so as to keep the classification right I use the list. My note book contains two hundred pages. The list mentions three hundred and thirty-six species. So I allow half a page for each bird. Each species in the list is numbered as it is mentioned, so I have only to halve that number to find the place it goes in the book. Thus—I want to put in the heading for the Pine Grosbeak. It is the two hundred and nineteenth bird listed. One-half of this is one hundred nine and a half. So it goes on the lower half of page one hundred and nine. Again, wishing to insert the Hoary Redpoll which is not mentioned in the list, I put a note on the margin of the page where it should go if there were room, and place it over in the back of the book.

Many people say all this is a lot of bother, but to one fond of the work it is

not so. If he doesn't care enough for Ornithology to devote half an hour now and again to his note book, he had better drop it.

The above system is the one I work. It fulfils my requirements better than any other method I have thus far seen. If anyone else has a better one I should like to hear from him.

P. A. TAVERNIER,
Guelph, Ont.

The Passing of Species.

At no time in our history has activity been greater in the ranks of oölogical collectors. In the West, at least, in my boyhood it seems as though the making of egg collections was mostly confined to very young lads who conceived no better method of preserving their specimens than end-blowing or stringing on a thread. From such small beginnings have grown the myriad collections, both great and small, in the hands not only of boys but of grave men and women and museums all over the country. It is no purpose of this paper to decry this pursuit. Its wisdom and its worthiness will doubtless always be open to question in the minds of those who are not of our number. As for ourselves it is safe to predict that the gathering process will go on so long as bird life shall exist.

And if the gathering of sets and series of sets was the only inroad upon the great annual renewal of supply it might be confidently expected that the devotees of many generations hence would be able to marshal as extensive collections as our own. But a multitude of hostile influences combine to rapidly deplete the supply.

It is not necessary to enumerate them here. They have been repeatedly discussed and deplored. But we are face to face with the fact that many common species of our boyhood are now

rare finds in any part of the country.

Catalogues listing prices surely need another intelligent revision.

I do not pretend to anything like a *comprehensive* knowledge of the present distribution of species. My observation has been limited. Born near the boundary line of Wisconsin and Illinois, when that was the frontier, I have gradually moved northwest with some purpose of keeping abreast of the western trend, so that it has been within narrow limits that I have witnessed what has seemed the rapidly accelerating movement which is decimating certain species at shortly recurring intervals.

Twenty-five years ago I watched the apparently unending flight of the Passenger Pigeon. Once I was accustomed to hear the Bald Eagle spoken of as rather common—yet in the past dozen years in the likeliest country I cannot be sure that I have seen but three. On the Mississippi in an early day we did not think of the Swallow-tailed Kite as especially rare—yet the other day a correspondent wrote me that he had just been so fortunate as to procure a set of two eggs at \$25.00.

Along Rock River in Southern Wisconsin "back in the sixty's" the Canada Goose occasionally nested. Later on I found it, if at all, in Northern Iowa and Minnesota, while now I should congratulate myself if I found two or three nests in a season away out here in their natural home, which only a dozen years ago was wholly unsettled. It is likewise with the Sandhill and Whooping Crane, the Trumpeter Swan, the Great Blue Heron, the Cormorants, Loon, Bittern, many Ducks, Woodcock, Long-billed Curlew, White Pelican and others.

Eleven years ago the last named bred here on Devil's Lake in great numbers, and a thrifty idler shipped one or two barrels of their eggs to an Eastern dealer. Since that time they have not been

known to nest just here, though an occasional small flock may be seen circling high overhead during the breeding season and I have not since been able to locate a nesting colony. The Common Tern and Franklin's Gull that furnished a local hotel many a basket of eggs for the table ten years ago, before the advent of poultry, nest but sparingly here now and the latter so successfully hide their breeding spot that no one can say with certainty that they have any here.

Whether the once familiar Bluebird is becoming extinct or whether it has only temporarily changed its range is being much discussed.

I may be growing old and my faculty for discovering nesting spots may be failing, but I no longer seem to be able to locate the nests of some species that in early days seemed commonest finds, and it becomes a very natural conclusion that a large number of species is being rapidly pushed northwest and west into regions either sparingly peopled or wholly unfit for human habitation—regions offering to many varieties scarcely any recommendation except freedom from pursuit by man—where vegetation is scanty and natural food supply in the shape of insect life much reduced.

Of course these observations do not apply to even a majority of species for many thrive best where population is dense. Such seem to enjoy contact with man and the domestic animals and are, doubtless, safe from extinction. John Burroughs, one of the closest observers of bird life, says that the British Isles with their dense population and their thousands of years of race activity, present the spectacle of amazing fertility among the common species of birds abounding there. Nests of many contain habitually larger sets than the same species exhibit here and no combination of adverse influences avails to stem the tide of exuberant bird life.

But the nature of a large number of varieties here is utterly incompatible with the rapid advance of crowded population. Such inevitably shun the haunts of man and it is with very natural regret that we observe their approaching doom. A high state of civilization and opulence of wild life are plainly antagonistic and only those species of birds and animals that possess or acquire something of the domestic spirit of the English Sparrow can hope to survive the inexorable advance of man. We would not stay his progress if we could. All else in nature must rightfully pay tribute to him and make way for his certain monopoly of opportunity.

But alas for our favorite creatures on the wing!

EUGENE S. ROLFE.

Minnewaukan, No. Dak.

From Trinidad.

Thinking perhaps your readers would like to hear from a lover of Nature who is wandering in the tropics, but who belongs in the Northern States, and with regard to birds familiar to many of your readers, I send you the few following lines relative to three birds very common here, two of which at least are well known in our Southern States.

Almost the first bird to challenge my attention as we came into the tropical zone was the Frigate Bird, that bird of enduring flight. At first I saw but few, but soon after entering upon the blue waters of the Carribean Sea, many of these birds came near our steamer. Here on the Gulf of Paria they can be seen almost any day. Sometimes many will be seen in the air at the same moment, crossing each others track in graceful interosculating circles.

Another and a much more familiar bird is the Brown Pelican. They are

extremely plentiful, and at all times of the day can be seen standing on the bars at the mouth of the Caroni River, or flying over the bay with alternate lumbering flap and sail of their broad wings, now and then pausing in their flight to strike some fish which their sharp eyes espied near the surface. They appear ridiculous as they turn a complete somersault on striking the water. Clumsy as they are they usually get their fish. I thought that I had seen the Brown Pelican in great numbers on the Gulf coast, and I usually did see many there, but here there are so many more that those I saw farther north now seem few.

One of the most noticeable birds here on the Island, that is, the one that will attract the most attention from the visitor to Port of Spain, is the Black Vulture or Carrion Crow. They are everywhere present, in the streets and on the house tops. In passing along the walks I have pushed them aside with my foot. But they are a wise bird and usually keep just beyond your reach. Sometimes, though they are so interested in their search for food that the pedestrian has to take it upon himself to avoid them. Here they are even more nearly domesticated than in Southern Louisiana. It is no uncommon sight to see a dozen of these birds racing down a street, going under carts and between the legs of the patient little donkeys, keeping up their ludicrous gait of hop and jump for a half block or more. The small boy does not seem to trouble the Vulture here, and as they are protected by law they live and grow fat on the refuse of the city.

Perhaps I can forward some few notes from the east bank of the Orinoco in the "disputed territory," where I shall spend some weeks or perhaps months in the interest of Ornithology.

LESLIE O. DART.

Port of Spain, Trinidad.

March 21, 1896.

Feathered Gems.

Of all the groups into which the scientists have divided the birds, the Hummingbirds are the most elegant and varied in form, brilliant in plumage, agile and graceful in movement. They inhabit exclusively the tropical and temperate portions of America, and form the most charming and interesting element in the bird-life of the Western World. The study of the Hummingbird is one of such peculiar interest that it may almost be said to constitute a separate department of the science of ornithology, and the word "trochilidist" has been coined to designate those paying special attention to this study.

Unfortunately, however, the naturalist has not been the only one to be attracted by the resplendent beauty of the Hummingbirds. There is a great demand for them for millinery and ornamental purposes that has greatly added to their destruction, and which has probably led to the extinction of certain tropical species. From South and Central America, and also from Mexico, thousands of skins have been sent annually to the great cities of Europe to be used for decorative purposes. The collectors resort to various means for obtaining these tiny birds, using nets, bird lime, small shot, and the blow pipe with clay pellets. At a single auction sale in London in 1888, over 12,000 Hummingbird skins were sold, and in the same year over 400,000 skins of American birds were disposed of in London within one week. This tremendous slaughter of our most beautiful and useful creatures means nothing less than the extermination of many different species.

The Hummingbirds are exclusively American, they have no representatives in any other part of the world. When considered superficially, and not structurally, the Sun Birds of the tropical

regions of the old World resemble the Hummingbirds in brilliancy of plumage' but in structure they are wholly unlike. The Sun Birds resemble in structure to a great degree the American Honey Creepers.

The Hummingbirds are the most numerous of all the families of birds that are distinctively American, there being fully five hundred distinct kinds, and new species are being constantly brought to light as investigations are pursued in the little known region of Mexico, Central and South America. They prefer mountainous districts where within small areas are found diversity of products and a varied surface of the soil. Most of the birds are found among the Andes, within ten degrees of the Equator, from this region they diminish rapidly both to the north and the south, and also eastward toward the lowlands of the South American continent. About fifty species are found in Mexico, and only seventeen have been discovered within the boundaries of the United States, all but eight of which barely crossing the Mexican border.

No species of Hummingbird has been discovered north of the sixty-first degree of latitude, the Rufous Hummingbird having been found that far north on the Pacific Coast. The eastern portion of the United States possesses but one species, the Ruby-throat, and this species has been traced as far north as the fifty-seventh degree north latitude. The mountainous region of south-western United States is more richly endowed with those beautiful birds, most of those found within the United States being resident here.

Without strict reference to geographical boundaries, the distribution of Hummingbirds may be approximately estimated as follows: Equador, 100 species, one-half of which are peculiar to that place alone; Columbia, about 100, one-half peculiar; Peru and Bolivia together about 95 species, one-half peculiar;

Central America, 70, 40 peculiar; Venezuela, 55, 15 peculiar; Brazil, 50, one-half peculiar; Mexico, 50, 28 peculiar; Guiana, 36, 12 peculiar; West Indies, 18, all peculiar; United States, 17; southern extremity of South America about 7.

The Hummingbirds, as a family, are the smallest of birds, yet many species are larger than the smallest passerine birds, such as the Creepers, Kinglets, Bush-tits, and the small Wrens. The largest of all Hummingbirds is the *Patagonia gigas*, or Giant Hummingbird. This is a plain colored bird that inhabits the higher portion of the Andes range from Chili to Ecuador, and is about eight and a half inches long. The smallest Hummingbird, and consequently the smallest of all birds, is Princess Helena's Hummingbird, the most exquisite of all the Hummingbirds of the West Indies, measuring but two and a quarter inches in length. This diminutive bird is of a rich metallic blue above, white beneath, and the head and the gorget a fiery metallic crimson. This blue is a peculiar coloration in this family. The Vervain Hummingbird of Jamaica has been until recently considered the smallest Hummingbird, but it is a trifle larger than its Cuban cousin.

A considerable variation also exists in the bills of the members of this family necessitated by the peculiarities of the flowers among which they are accustomed to feed. The "Sword Bearer" has a bill fully five inches in length, exceeding in length the combined length of the head, neck, body, and tail. In another species the bill is but one-quarter of an inch in length. In other species the bill is decurved; and in one instance to such an extent as to constitute one-third of a circle. In another species the bill is recurved similar to that of an Avocet. A great variation also exists in the form of the wing and the tail, while the various kinds of head ornaments furnish striking evi-

dence of the variation that exists in the developement of their feathering.

In habits the Hummingbirds are both arboreal and aerial. In flight they present an appearance entirely peculiar to themselves. They spend the greater part of their lives in the air, frequently hovering before a flower to procure their food, which consists chiefly of minute insects. When so employed their body is nearly vertical, the head being held at almost right angles to the body, and the wings beating so rapidly as to form an indistinct haze. The tail is spread and the bird regulates its position by quickly flirting it to and fro.

The Duke of Argyle in his "Reign of Law" positively asserts; "No bird can ever fly backwards." Many naturalists differ from this author. If one will but closely watch a Hummingbird poised before a flower he can see that the bird can easily move backward or forward assisted by a slight flirt of its tail, a feat that no other bird can perform. In his magnificent work entitled "A Monograph of the Trochilidae," Mr. Gould, the naturalist, states, "This bird (the Hummingbird) preforms every kind of evolution with the utmost ease, frequently rising perpendicularly, flying backward, pirouetting or dancing off, as it were."

The Hummingbird frequently perches upon some prominent twig at the top of the tree and there rests for several minutes at a time from whence it will dart away like a little meteor and disappear with the quickness of thought. During the heat of the day it visits the shady retreat beneath the trees, and during the cool hours of the morning or the evening the flower pots, verandas, and other exposed places are resorted to. While in flight the Hummingbird will frequently poised in mid-air and throw its body into quick and curious contortions as it catches the insects floating in the air.

A peculiar habit of many of the species of Hummingbird inhabiting the United States may be described as follows, The male observes another bird' probably of its own species or otherwise, perched in some exposed position; he will then mount perpendicularly to a height of forty or fifty feet, then with a headlong sloop he plunges downward at the object of his wrath; as he approaches his foe he rises again in a sharp curve to mount on high and repeat again and again the maneuver. Upon nearing the object of attack he utters a shrill shriek of defiance which grows louder and louder as he descends and dies away as he mounts again.

In California, especially where the Hummingbirds are numerous, we may occasionally see one of these tiny creatures sitting upon some prominent perch engaged in warbling in a shrill weak tune a continuous melody for several minutes. This song, if it may be called such, is rather monotonous, and can scarcely be heard more than forty or fifty feet away.

In performing its ablutions, a Hummingbird usually resorts to a waterfall where it dashes hurriedly through the spray a couple of times thus thoroughly wetting its plumage. The spray of a lawn sprinkler is also resorted to for this purpose. Where a spray cannot be found the bird will pass rapidly over a body of water striking the surface with its feet and breast. After thus wetting its plumage the bird will repair to some convenient porch where it will preen its plumage. Then engaged in this task, and it is one which they seem to delight in, it will assume many graceful attitudes in which its gorgeous dress is shown to great advantage. It will spread one wing at a time and carefully pass each quill feather through its bill for its entire length, several minutes will be spent opening and closing its wings and tail, ruffling its feathers, and arranging its plumage.

The Hummingbirds are very pugnacious and wage incessant warfare on all species of birds, as well as among themselves. They establish themselves in certain areas and will permit no intruders upon their domain. During the nesting season they indiscriminately assail any bird that approaches the vicinity of their nests. Frequently when two Hummingbirds meet about a bed of flowers a battle will ensue; the battle will be sustained in mid-air, the pigmy belligerents mounting higher and higher, sweeping each other by the bill and whirling around and around till the one receiving the worst of the fight darts away with the victor in hot pursuit, and the latter never relinquishes the defeated combatant of doubling, turning, and hiding finally succeeds in making good its escape. The conqueror will then return to the feast that his valor has won, or, mounting guard upon some prominent twig, with his glowing breast turned to the sun and presenting all the radiant colors of the emerald, the ruby, and the sapphire, he will await his opponents return.

These Lilliputian battles are continued all day long, the females participating with all the ardor displayed by the males; and were the strength of these pigmy combatants at all commensurate with their fury, their continuous warfare would almost extinguish the family. But fortunately, with all the fury of those conflicts their puny strength is such that scarcely a feather is detached from their resplendent plumage. After each battle the indomitable spirit of the vanquished prompts his return and another contest ensues. Sometimes they suspend hostilities long enough to suck a few flowers, but mutual proximity is bound to bring on the contest again.

The Anna's Hummingbird, the most common species we have in California, is perhaps the most beautiful of North American Hummingbirds and is quite

generally distributed throughout the State. These birds nest about the beds of bright-tinted flowers which are so numerous in this State. They find in these flowers rich store-houses of minute forms of forest life which constitute a great share of their diet. Here they hover upon tremulous winglets, now feasting upon the sweets so abundantly found, now fighting over the possession of some tempting flower, now and then individuals darting away with a speed that baffles the eye in a course marked by the luminous glow of their refulgent colors; the bright flowers, the graceful movements of the birds and the beautiful, changeful hues of their plumage intensified by the sunlight all forms a picture of remarkable beauty.

The nests of the Hummingbirds are among the most beautiful examples of bird architecture. They are composed of fine materials and are made extremely soft and comfortable, usually compactly felted structures of a cup-shaped form. The substances used in their construction are chiefly plant down, interwoven and strengthened by cob-webs and often covered externally with lichens. Small feathers are also frequently used to advantage. In California a common material is the down from the sycamore. These nests are usually saddled upon a horizontal twig without any effort at concealment among the foliage, as is the custom with most other birds; yet so much does the nest resemble a knot or other excrescence, or a bit of rubbish that it might easily pass unnoticed. Hummingbird nests are usually found through pure accident, although one, by carefully watching the birds when they are suspected of having a nest in the vicinity, may be led to it by the unsuspecting birds.

The eggs of all Hummingbirds are two in number, pure white in color, and usually oblong in form and rather large for the size of the birds. The

period of incubation is about twelve days, two or more broods are raised in a year.

H. C. LILLIE,
Visalia, Calif.

Oölogical Crookedness.

The list of a lot of eggs privately offered by a Texas collector "dirt cheap," contained "1-6 Am. Raven; 1-5 White-necked Raven," and, among other small fry,—"1-2 Plumbeous Chickadee, 1-5 Cowbird." In amusement, I allowed a lot of cheap sets, including the "1-5 Cowbird" to be sent on approval, with the "Plumbeous Chickadee,"—and the alleged two sorts of Raven eggs. Of these latter, the eggs of the larger set were identified at Washington as *surely* White-necked Raven, though "identification" on the data read "bird stuffed" (which is, by the way, about as satisfactory as the stereotyped "sure" which any dolt can affix to any data for any eggs!) On the data for the two very pretty Titmouse (?) eggs, I read, "Nest on small branch of a tree. Built much like a Wren's." Almost as amusing is the description on the data for that "set" of Cowbirds: "nest of sticks and grass in a tree, ten feet up. Think it was a Red-birds nest." A set of "Boat-tail" eggs, sold for a song, were not Boat-tails at all; a set of Blue Grosbeak contained three eggs by as many Grosbeaks, with as many degrees of blow-hole bigness, with one egg of an Indigo Bunting; while, save in two instances, there were no set marks on any of the eggs in the whole invoice.

This astonishing collector has the start of us in ways other than in his ability to blow hot and cold with the same mouth. He can, for instance, take eggs of both Lark Finch and Western Lark Finch in the same county. Out of four Lark Finch sets of a uniform five, each, there were hardly three eggs that could, by any probabili-

ty, be attributed to the same bird,—beautiful as the series was,—while they had been blown, evidently, at different times and in different measures, and in varying degrees. Worse yet: eggs of one set bore half-erased Ridgway marks, which the collector has neatly explained by saying that his brother, that continually bobbing and ever-rascally brother, had marked *four* of the eggs with the Ridgway numbers; while on the fifth day, a fifth egg was brought from the nest, and all were then marked properly and up-to-date!

My correspondent pleads innocence, and the eggs he has sent out support his plea. But, lest he impose his innocence, through an advertisement, on others, I would fain have the public know what his sets as like, "hence these tears,"—for "a word to the wise is sufficient."

Last summer, I found that a much-cherished set of eggs of the "Blue-winged Warbler," taken, and sent out with autograph data by one who is now a fairly well-know student of Biology, were hand-painted. Despite his fame and the years that have elapsed since the cleverly stippled set of Yellow-throat eggs were received, I hope still, to make that painter's "— — flanks to smoke as they had basted been." What has he done, I wonder, with my eight dollars worth of precious Buff-breasted Sandpiper skins,—made up from fat birds beside the midnight lamp? The soul of such a man is smaller even than the careases of the microscopic parasites into whose anatomy he so enthusiastically noses.

One of the Florida boys has offered me, among other rarities, sets of Fish Crow; White-eyed Towhee; Mountain Song Sparrow; Florida Burrowing Owl; Southern Hairy Woodpecker. These he didn't have at the the beginning of the season who has been taking him in?

P. B. PEABODY,
St. Vincent, Minn.

Common Terns.

On the 10th of June, 1895 I received a note from my friend, J. C. Laying, that the "Swallows were in," and on the 23d, my brother Tom, our friend J. D., and myself boarded the Bayhaven of the Continental Co., bound for Little Rhodies Summer Capitol. The spotted treasures of that bird of so many names—Common Tern, Wilson's Tern, Red-shank, Mackerel Gull, and Summer Gull—were the prizes which we sought. It was a glorious day, as we passed through the varied and beautiful scenery of Providence river and Narragansett Bay, and reaching Newport in good time, we hastened across the city and were soon aboard J. C's. powerful row-boat, built to withstand heavy seas, for we were then on the open Atlantic.

A row of one and one-half miles around the "cliffs" brought us in sight of Gull Rock, a solitary sea-covered mass of conglomerate rock, about one hundred feet long by seventy broad, rising out of the surf and scarcely more than two hundred and fifty yards from "The Breakers," Cornelius Vanderbilt's palatial summer cottage.

As we drew nearer we saw many singles and pairs of the beautiful little Terns, fishing in the eddies or skimming by within easy gun shot, and when we were about two hundred yards, distant from the nesting site, they rose, en masse—about two hundred in all—and kept up a continual cry of alarm as long as we remained about the rock.

Upon making a landing we stopped to gaze a moment, before the pilfering began, and to one not accustomed to seeing colonies of nests, it was a pretty sight. The part of the rock which is sometimes flooded by high tides is avoided by the Terns, and the eggs are all laid in an area of about thirty feet square. Twenty sets were visible from one point. The sets contained two or three eggs each and one prolific house-

keeper favored us with the very rare set of four eggs. The eggs were laid, some on the bare rocks, in a little natural hollow, others on a few bits of broken stone (not pebbles) which were shaped into a nest, and others still, had a rude nest made of a rank grass that grew very sparsely out of crevasses in the rock. On blowing the eggs we noticed that wherever there was a grass nest, the eggs were well along in incubation. Whether this was caused by the first layer's getting most of the loose grass, or whether it was placed there by the birds after incubation had begun, we do not venture to say, but we incline to the former, as some of the eggs taken from the bare rock showed incubation of from seven to fourteen days.

The ground color of the eggs varies from pale green to olive and from light to very dark brown, spotted and blotched with various shades of brown, blackish lilac and olive. The eggs of the same set often show great variation of color and marking, but have a nearly uniform size and shape. In the set of four mentioned above all are small, and all have a ground color of brown, no two of the same shade, spotted and blotched with shades of brown and lilac. The smallest egg of this set, which is almost a runt, has the darkest brown ground color of any egg of this species in our cabinet.

Another set of two has a very odd egg. The ground color which was of the palest green, has faded almost to white, and it is marked very sparingly with large blotches of blackish brown, giving it very much the appearance of an egg of the Black Skimmer. The other egg of the set is of normal color and marking.

We collected in all seventy-five eggs; nineteen sets of three, seven sets of two and one set of four. We carefully marked and rolled each set, as soon as taken, and so had no broken or mixed

eggs to sorrow over when we reached home.

After dinner at J. C's. we donned hip-boots and waded among the reeds which border a fresh pond near the beach, in search of the nests of the Long-billed Marsh Wren. After an hours fruitless wading we were compelled to give up, beaten by the Wrens. When we reached the boat to return to Providence, with one voice we agreed to place June 23, as one of the most pleasant of the many days we spent collecting in the season of '95.

JOHN H. FLANAGAN,
Providence, R. I.

Two Interesting Birds of Tonawanda Swamp.

The American Bittern is another interesting bird to anyone who has studied their habits. These birds were quite common here last year, but were a great deal commoner two or three years ago. They arrive about the middle of April, if the season is good, and nest from the first of May to the latter part of June.

Every morning long before the sun rises, during their mating and breeding season, one may hear their peculiar cry which sounds like a mallet striking a stako and procures them the name "stake-drivers" by which they are commonly called. They are very shy, especially in their breeding grounds, where they sit in the tall grass and are seldom seen. Their nests are very hard to find if one does not know how to look for them as I know by experience, but I have spent many unsuccessful and weary hours looking for them before I discovered the secret of finding them. One day as I was walking across a large marsh of about two thousand acres I accidentally came upon an old Bittern sitting on her nest. As they will not leave their nests until they know you see them and sometimes not then, I was obliged to raise Mrs.

Bittern from her nest, in order to examine it and its contents. The nest, which was placed on the ground and composed of fine, dry grass, contained five eggs of a dark brownish-drab color and about the size of a pullet's egg. Upon looking around the nest, I discovered that the old birds did not fly directly from their nests but would walk from two to ten rods before they would fly away. When they return to them they will alight in the grass about the same distance from them: as they do when they fly from them, and then walk to the nest.

As they walked through the tall grass I noticed they bent the tops over and in this way I could follow their paths and find their nest. On May 18th, 1893, I and my brother collected eighteen eggs of the American Bittern in one hour, and a short time after we collected twenty-six in half a day.

We have since collected about two hundred of their eggs, finding them all by following the paths of the birds. The eggs vary in shape and size, some being nearly round, some long and pointed, and some much larger than others. The number of eggs in each set varied from three to six, but nearly all contained four or five, although Davie says they usually lay three or four. I have found but very few nests containing three eggs when the full set was laid, and those were generally the second nests of the season.

The nests are, as a rule, very slovenly put together, although I have seen some very good ones, nicely made and lined. Some are made of dead, dry grass, and I have found some made entirely of golden rod stumps. They are generally flat, being hollowed just enough to keep the eggs from rolling out, well hidden, and placed on the ground in the long grass or reeds.

They sometimes nest in hay fields, and it is a very common occurrence to find young Bitterns in the field when

mowing hay. Some writers claim the Bittern does not nest in colonies, but I have found three or four nests inside a circle of ten rods diameter.

They will often set on their nests and let one pass within two feet of them, and if you do not get your eye on them, they will not fly or make any movement. They are gluttonous eaters, and being carnivorous, live on frogs, fish, crabs, etc., or any smaller animal they can swallow. The young remain in the nest about a week or ten days after hatching, when they are led away by the old birds to some feeding grounds or watering place, or if these are not within reach, they are left to roam about in the grass, at their will, while the old birds seek food for them. I have known old Bitterns to fly several miles to a suitable fishpond or other feeding grounds, in search of food. They will go the same route every day, flying back and forth with frogs or small fish, which they take to their young. They will, with the assistance of the Great Blue Heron, sometimes exterminate the small fish from a pond or creek in this way.

I have sometimes hidden in a suitable place and watched the old birds feed their young. When she arrives with her supply of food, the young ones (if large enough to leave the nest) will crowd around her, or if the young ones are still in the nest, the old bird will go to them, and then, with a squawk they will all reach for it, and the one who is quickest in action, or has the longest beak or neck, gets the prize and down it goes. The young Bitterns are gradually left to care for themselves, as they grow older.

I have caught young Bitterns and fed them large frogs and fish six inches long, which they swallow with ease.

The American Bittern is very hard to discover, for when not hidden in the grass, it places its beak and neck straight into the air, thereby resembling

a stake and often mistaken for such. The American Bittern leaves for the south about the first of September.

DANA C. GILLETT,
Barre Centre, N. Y.

The Feathered Choir.

In a beautiful rural landscape it is the birds that give life and vigor to the scene; and when the passing breeze brings sweet sounds of harmony to the ear, it comes from those lovely feathered choiristers who give animation and beauty to nature.

The Mockingbird is unquestionably the prince and leader of the feathered choir, and for his power of imitation, compass of voice, and brilliancy of execution, has no compeer among all his tribe.

I have heard him imitate the voice of many animals, as well as the sounds of instruments and other artificial noises. He is not, however, a mere mimic; he possesses an original talent, and sings, with boldness, richness, grace, and variety.

The song of the Cuckoo is well known, consisting of a clear, echoing repetition of two notes which closely resemble the syllables *kook-koo*, whence the bird's name. When heard at a short distance, on a still summer evening, its effect is not unpleasing, and it harmonizes, with the spirit of the scene.

The Wood or Song Thrush is a charming songster, frequenting the the most lonely and secluded portions of our forests. They are never seen but in pairs or singly, and oftener heard than seen. The male is generally discovered on the top of some high tree in the morning, or towards the evening where he pours forth his few, but very sweet notes, making the woods echo with his melody.

But of all the birds of our groves and meadows, the Bobolink was the envy of my boyhood. He crossed my path in the sweetest weather, and the sweetest

season of the year. But I, luckless urchin, was doomed to be mewed up during the livelong day, in that purgatory of boyhood, a schoolroom. It seemed as if the little varlet mocked at me, as he flew by in full song, and sought to taunt me with his happier lot.

Oh how I envied him, no lessons, no task, no hateful school, nothing but holiday, frolic, green fields, and fine weather. Had I been then more versed in poetry, I might have addressed my school chums, in the following words:

List, O list to the Rice Bird's song,
As it peals through the rice grounds clear and strong;
With a sudden change from high to low,
And a rapid throb, as it beats to and fro.

I have often wondered, that if our song birds could only fly to Heaven's Gate and there pour out their songs of love, gratitude, and praise, what a great blessing it would be for ornithologists to know that these beautiful denizens of our woods not only sing their songs for our pleasure, but that they sing them to the Creator who made them.

There are many birds who belong to the feathered choir, and if I were to mention them, and tell you all about them, it would fill a voluminous book. I would solicit every boy and girl to become a student of nature. It is an inexhaustible source of pleasure, and affords one many a happy moment.

WILLIAM M. PALMER,
New York City.

Clay-colored Sparrow.

In the March issue of THE OÖLOGIST, page 21, Mr. Arnold records a nest made of dried grass lined with hair containing small blue eggs marked with reddish brown, which he cannot identify. The eggs in question are undoubtedly those of the Clay-colored Sparrow.

This species I have found nesting from Winnipeg right across the continent to the Rocky Mountain foothills. It usually builds its nest in the grass at the root of a shrub, but sometimes in a bush as high as two feet above the ground.

The eggs are very beautiful and smaller than those of the Chipping Sparrow, of a greenish blue ground color spotted and sometimes streaked at the larger end with reddish brown.

W. RAINE, Toronto.

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dollars, payable to the first person who
successfully assails it,—*From Printers'
Ink, issue of May 6th, 1896.*

The Great Blue Heron in Yates Co., N. Y.

The Great Blue Heron arrives here in
the latter part of March sometimes as
early as the 25th but usually about the
30th. The first contingent generally
consists of six to ten birds, while others
come straggling either alone or in pairs.
They remain here about two weeks,
fishing along the shore of lake and ad-
acent marshes, when they leave for
their rookery a few miles north.

It was my pleasure to first discover
this rookery May 6, 1894—in company
with my friend, Verdi Burtch. We had
heard that "Cranes" nested at this
place, therefore we determined to visit
the rookery at our first opportunity.
After a spin of nine miles we arrived
near the swamp and putting our
wheels in a barn, we started for the
marsh. It is situated in a valley run-
ning north and south, is 12 miles long
and about 2 in width.

It has never been cleared off and con-
sequently is grown up with large tim-
ber, mostly ash. But in portions there
are tall pines, also large areas covered
with dense tamaracks where trees have
fallen in every direction, which with
the tangled vegetation, etc., makes it
almost impenetrable.

It was not an ideal day such as an
oölogist likes to have for it commenced
to rain and kept on raining all day. As
we neared the swamp we noticed a tree
which towered above all others, and in
it were five bulky nests of the Great

Blue Heron. But as it was on the east side of the swamp, and we on the west we decided to explore the swamp forest a few miles north and return via the rookery. But for various reasons (better explained by Verdi) we failed to connect, for after an hour's comparatively easy tramp, we came to the edge of the tamaracks. Just the place for Sharp-shinned Hawks, thought I, while my companion scrambled over fallen trees and tangled vines, with every sense on the alert looking for something rare. I want to say right here that the rarest thing we saw was birds nests. We spent nearly two hours jumping logs, etc., and another hour trying to get out, also expressing our opinion as to what we wouldn't do again when we did get out. At last we came to a deep muddy creek which ran through the swamp and in order to visit the Herons' rookery we had to cross it. The water was icy so wading was out of the question. However we soon found a small barkless tree, which had fallen across the creek. I had nearly across reached the opposite bank when V. started to walk over. When nearly across his feet suddenly parted letting him down straddle the tree, both legs dangling in the water which so disturbed my equilibrium that I did likewise. However we soon slid over and now for that rookery, says V. Another hard tramp and we came to the edge of the swamp. We were obliged to climb a tree to get our bearings. The rookery loomed up half a mile away so we headed directly for it. But after entering the dense swamp forest we again went astray, and no rookery could we find. So as it began to rain harder we started for the bicycles. But we were not out of the wilderness yet, and I finally climbed a tree which gave me a view of the hills. I informed Verdi that if we kept on as we were going we would get out by walking 10 miles or so. "But which way do we want to

go?" shouted Verdi. "To the left," was my reply and that's about the last I saw of him until we reached terra firma. Wet and fatigued, we started home with only a set of Song Sparrow as a memento of our trip.

However, as the week and my fatigue passed away I decided to make another attempt. As May 13 dawned bright and clear I bestrode my wheel and started. Arriving at the swamp I located the tree with five nests and by keeping the sun over my right shoulder I had no difficulty in reaching the rookery. But what a contrast! A week ago it was dark and gloomy, now the sunshine penetrated every nook, and I could hear the scream of Red-tail Hawks in the distance. Blue Jay's shrill cry could be heard, while countless Warblers and Vireos filled the air with melody.

Reaching the tree with five nests I soon had my climbers on, noticing meanwhile that the tree was about three feet in diameter, limbless to the nests which were up about 70 feet. As I neared the nests the sitting Herons flew off while the whole tribe made the woods ring with their coarse "grrah." Three of the nests contained sets of five eggs, one set of six, and one of seven eggs which is an unusual large set. As one of the eggs was a runt I believe the clutch was laid by one bird. There were about 30 nests, all in high ash trees and composed solely of large and small sticks, except in one instance; there was a lining of some straw. Five eggs was the average per set, six not unusual and only one set of four. Incubation advanced, and I should judge that the Herons began laying the last week of April.

The Great Blue Herons obtain most of their food in the creek and marshes near the rookery. But their supply seems to get short, for as the young begin to mature and demand more food the Herons begin to visit both Canandaigua and Keuka Lake, a distance of eight miles.

C. F. STONE.



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			Fossil leaves, like last, 1½ to 3 in	35, 75, 17, 27
			The "Little Gem" collection of semi-precious stones. It consists of the following, all polished and labelled, one of each: Sard, bloodstone, cat's-eye, tiger eye, gold-stone, lapis-lazuli, sard onyx coral-agate, dendritic - agate, moss agate, nicoli, chalcedony, 2 var. each; carnelian and wood agates, 3 var. black onyx agate, and one shell charm; 20 in all, amounting at regular retail price to \$1 50. I will send you the whole collection for	75

MINERALS.

Prepaid.	
Iceland spar	\$ 25
Celestite	10
White malachite	25
Green malachite	25
Asphaltum	15
Lignite	15
Magnetite	20
Lepidolite	25
Iridescent pyrites	50
Calcite, nail head variety	25
Siderite	15
Quartz Crystals, double terminated.	15

SECOND-CLASS EGGS.

Many very desirable ones. They are either blown with large or chipped hole, or else cracked more or less. First column gives price for a first-class egg, second column my price for the second-class one I have in stock.	
*Snowy Heron	15
*Louisiana Heron	12
Little Blue Heron	10
*White Ibis	25
Collection of 15 varieties, all different for only	25

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